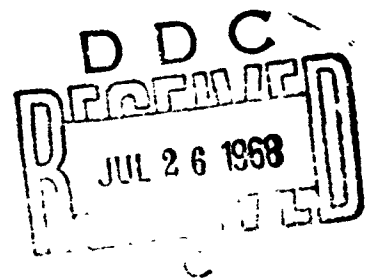


MEMORANDUM
RM-5530-PR
JUNE 1968

AD 672251

THE LEGACIES OF CENTRAL PLANNING

Egon Neuberger



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PREFACE

A study of the possible legacies of a centrally planned economy (CPE) of the Soviet type may serve three functions: (1) to explore the possible problems of transition that currently are and will be faced by the USSR and the countries of Eastern Europe in their groping for a new system to replace the model built by Stalin in his heyday, and imitated in Eastern Europe; (2) to assist leaders in underdeveloped countries, searching for ways to develop their economies, to gain a more complete picture of the gains and losses that might be encountered from the selection of either the full Soviet type of model of economic development or, more important, of some of its key elements; and possibly (3) to provide some insights for students of centralized bureaucratic systems in general.

The author wishes to thank the American Philosophical Society for making it possible for him to visit Yugoslavia; this study would not have been written without that visit. Recasting and expansion of the Memorandum followed comments by A. Becker, W. Brown, E. Dews, E. Domar, O. Hoeffding, A. Horelick, and N. Nimitz of the RAND research staff, and by G. Rosen of the Asian Development Bank. A. A. Brown of the University of Southern California discussed the study at every stage and offered valuable criticism. These colleagues deserve credit for improvements in the study but no blame for remaining deficiencies.

The author is a Professor of Economics at the State University of New York at Stony Brook.

SUMMARY

Section I gives the background for the study and the reasons for taking up the legacy problem. A description follows of the traditional CPE, in terms of its goals, key elements, planning methods, and desirable and undesirable consequences. Next, it is shown why the balance is likely to shift over time and make the system produce more undesirable than desirable consequences, forcing the system's directors (Abram Bergson's shorthand term for the decision-makers in an economic system) to consider a change in the system.

This discussion serves to bring together in one place the various considerations that are necessary to evaluate the relative merits of the CPE during its own lifetime. It also lays the groundwork for the most important part of this study, the discussion of the possible legacies of the CPE. They will make the process of transition to a successor system much more difficult and painful and will provide a favorable or unfavorable inheritance to the new system, once it is established.

The use of the terms "desirable" and "undesirable" to describe the consequences of the CPE and the later description of legacies as "positive" and "negative" rests, of course, on the type of preference functions that are considered. A careful treatment of this subject would require another study, at least as comprehensive as the present one, and someone who is more expert in this field than the author. Without arguing that the preference functions used in this study represent a correct interpretation of the probable preferences of the three types of system's directors of interest to us, those of the CPE, of the successor system to the CPE, and of underdeveloped countries, let us state explicitly what is assumed.¹

¹If the reader judges that the wrong parameters have been included in the functions, he should delete or add those parameters he deems appropriate. In this case, he will have to alter the evaluation of the desirability of any given consequence or legacy to correspond to the modified preference function.

The preference function assumed for the system's directors of a CPE, as discussed in Section II, includes rapid growth and "centralization" as the basic goals. As argued in Section III, the two goals are likely to conflict as the economy matures. If the system's directors decide to give greater importance to economic growth and to satisfying the desires of their populations, they may be prepared to accept some limitations on the degree and type of centralization they consider essential, by accepting a type of "visible hand" system, as has happened in Yugoslavia, and to a lesser extent in Czechoslovakia, and even Hungary.

The relative importance of the growth and centralization parameters in the system's directors' preference function, the performance of the economic system under the CPE, and the system's directors' judgment of the political, ideological, and economic effects of a transition to a new system represent some of the major factors determining the likelihood of such a transition. It is assumed that the system's directors of the hypothetical underdeveloped countries being considered look upon economic growth and the desires of their populations as the primary parameters, and relegate centralization for its own sake to a subsidiary instrumental position.

In countries consisting of two or more nationalities, where centrifugal forces threaten a disruption of the nation, some mix of centralization with regional decentralization and attempts to deal with regional imbalances in levels of economic development may also be considered primary parameters, whether the countries have a CPE or a visible hand regime, or are underdeveloped countries still in the process of developing their system of economic organization.

The final conclusion of the study, that the negative legacies of the CPE appear to outweigh the positive ones, is clearly very tentative. Furthermore, for any definitive answer it would, of course, be necessary to evaluate the legacies of alternative economic systems and to compare them. Each economic system yields certain desirable and undesirable consequences during its lifetime and bequeaths certain positive and negative legacies to any successor system. Thus, it

would be necessary to examine the ability of a pure market economy, a controlled market economy, or a cybernetic economy to function indefinitely, and if they were not judged to be perpetually viable, then their probable legacies would have to be evaluated.

CONTENTS

PREFACE	iii
SUMMARY	v
<u>Section</u>	
I INTRODUCTION	1
II THE CENTRALLY PLANNED ECONOMY	5
Objectives	5
Key Elements	6
Planning Mechanisms	7
Primary Planning Mechanisms	7
Secondary Planning Mechanisms	8
Desirable Consequences	10
Socioeconomic Reorganization	10
Mobilization of Inputs	11
Acceleration and Channeling of Economic Development	11
Alleviation of Market Imperfections	12
Promotion of Economic Stability	12
Undesirable Consequences	13
Administrative Inefficiencies	13
Unreliable Valuation Criteria	14
Microeconomic Inefficiencies	16
Microeconomic Problems	17
Adjustment Mechanisms	18
III REASONS FOR PROBABLE DEMISE OF THE CPE	20
Domestic Factors	21
International Economic Factors	23
IV LEGACIES OF THE CPE	28
Positive Legacies	29
Negative Legacies	32
Institutional Legacies	37
Economic Legacies	41
V THE YUGOSLAV EXPERIENCE	47
Three Yugoslav Statements on the Legacy Problem	47
Brief Statistical Survey	49
Controls Over Prices	51
Price Disparities	53
Foreign Trade and Foreign Exchange System	57
VI CONCLUDING REMARKS	60

I. INTRODUCTION

In the voluminous literature on the relative merits of the Soviet system of central planning, one key aspect has been relatively neglected -- the legacies this system bequeaths to the system or systems that follow it. Marx, Schumpeter, and others have discussed the transition problem from capitalism to socialism and the legacies that socialism inherits from capitalism. This study is an exploratory venture and an attempt to initiate a discussion of this "legacy problem" -- the transition from the Soviet type of socialism to a new system and the desirable and undesirable features this system will inherit.¹

The idea for this study came to me during a study trip to Yugoslavia in the summer of 1966. I was impressed by two apparently contradictory aspects of the Yugoslav economy. The first was represented by the impressive changes that had taken place since my last visit to Yugoslavia in 1957, and the very great differences between the present Yugoslav system and that of the USSR and Eastern Europe, which I had been studying for many years and had personal contact with during visits in 1952-1953 and 1963. This aspect came as no great surprise

¹The following studies provide a good survey of writings on this topic and have been extremely useful in defining the key elements of the Soviet system of central planning and their consequences. Paul A. Baran, "National Economic Planning." A Survey of Contemporary Economics, Vol. II, B. F. Haley (ed.), Homewood, Illinois, Richard D. Irwin, Inc., 1952, pp. 355-403. Maurice Dobb, Soviet Economic Development Since 1917, 5th ed., London, Routledge & Kegan Paul Ltd., 1960. Alexander Erlich, "Development Strategy and Planning: The Soviet Experience," Conference on Economic Planning, sponsored by Universities -- NBER, Princeton, November 1964. Oleg Hoeffding, "State Planning and Forced Industrialization," Problems of Communism, VIII, No. 6 (November-December 1959), pp. 38-46 (reprinted in F. Holzman, Readings on the Soviet Economy). J. M. Montias, "The Soviet Model and the Underdeveloped Areas," in N. Spulber (ed.), Study of the Soviet Economy, Bloomington, Indiana, University of Indiana, 1961, pp. 57-80. Alec Nove, "The Soviet Model and Underdeveloped Countries," International Affairs, Vol. 37, No. 1, January 1961, pp. 29-38. Francis Seton, "Planning and Economic Growth: Asia, Africa, and the Soviet Model," Soviet Survey, January-March 1960, pp. 38-44. Peter J. D. Wiles, The Political Economy of Communism, Cambridge, Massachusetts, Harvard University Press, 1962.

to me. The other aspect, however, did surprise me. I found that even as late as 1966, or 14 years after Yugoslavia had begun moving toward a system of market socialism, based on worker management, it was still possible to find vestiges of the old Stalinist system.

There is no shortage of analyses of the operation of the CPE, and I have therefore chosen to focus on the less crucial, but relatively neglected, issue of the evaluation of the probable legacies that the system will pass on to its heirs. With the analogy of automobile buying, let us assume that safety, frequency of repair, comfort, roadability, and so forth, had been fully studied, but resale value had for some reason been overlooked. In that case the marginal benefit from studying relative resale values and informing potential buyers that there are considerable differences between various cars in this respect might very well exceed the marginal benefit from duplicating the studies of the cars' operational characteristics.

The fact that the Soviet type of system, which had reigned only from 1947 to 1952, had been able to sink its roots deeply enough into the minds, institutions, and economic structure of Yugoslavia to leave behind important legacies even at this late date gave me the impetus to initiate an investigation of the problem of legacies of CPEs.¹ The focus on legacies is useful in helping us to understand somewhat better

¹On the other hand, the short duration of the system in Yugoslavia did not permit Yugoslav leaders to modify the system during its lifetime to eliminate some of the most deleterious aspects of Stalinism. Since virtually all of the present-day CPEs are engaging in such modifications, this will make certain aspects of the legacy problem somewhat less serious. In addition, some specific features of the Yugoslav situation force us to be very careful in simply applying the Yugoslav case to forecasting the nature and significance of the legacy problem in the CPEs. The leaders of CPEs, as well as their economic consultants, are studying the Yugoslav experience very carefully and have the opportunity to learn from Yugoslav achievements and mistakes. The very great regional differences in economic development and the connection of this with the nationality problem in Yugoslavia, as well as the bold experiment with worker self-management, have certainly affected the Yugoslav experience and must be taken into account in applying this experience to the CPEs.

the events transpiring in those Communist countries that are considering significant alterations in their economic systems or that have already begun the process of substituting a successor regime for the CPE. In addition, whatever our judgment of the merit of the CPE as an engine of economic development, the inclusion of the legacy problem appears to change the equation in such a way as to make the system look less desirable. Although positive legacies are very important, the negative legacies seem to outweigh them (when this evaluation is based on reasonable assumptions regarding the preference functions of those potentially interested in the system). For a full comparative analysis, it would be necessary to study the merits of other potential economic systems in terms of their success during their lifetimes and of their legacies.

Once I had decided to investigate the legacy problem, I looked upon the familiar features of centrally planned economies from a new point of view. I asked the question: "What are the key features of this type of economy and what legacies might they be expected to bequeath to a successor system?" In addition to this basically deductive approach, I also adopted an inductive approach by studying the possible evidences of legacies in the present Yugoslav situation. The discussion of legacies in this study is based on the combination of these two approaches.

One reason why no one has approached the study of legacies of CPEs before this is that, until recently, it appeared that the Soviet system or one very similar to it could remain in effect indefinitely, with Yugoslavia the only country declaring it obsolete. Students of CPEs have dealt primarily with the Soviet economy, and despite Khrushchev's bluster and tinkering, his heirs inherited an economic system that did not differ in essentials from the one Khrushchev himself inherited. However, beginning with 1965, even the Soviet Union began following the lead of the smaller Eastern European countries and initiated a policy of economic reform that some observers believe will lead to even more radical transformations. Thus, although it was quite natural to ignore the legacy problem in the past, the logic of recent developments makes it highly desirable to make a start at filling this gap.

The recent developments in Czechoslovakia, and to some extent in Hungary, indicate that the legacy problem is no longer a purely Yugoslav phenomenon.

The present Yugoslav system is, of course, not the only possible alternative to the Soviet system. As I have argued in a previous paper,¹ two basic reform alternatives are open to a Communist country: (1) a strengthening and improvement of the central planning mechanism by utilizing the new tools of information technology, the cybernetic solution, and (2) a system in which the central authorities exercise control over the economic development strategy, but use a relatively decentralized market system to implement this strategy, the "visible hand."² I would argue that the probable future Yugoslav system will be one of a visible hand type, with the important specific feature that workers are taking over the role of stockholders in the enterprises.

I shall not deal with the legacy problem in the cybernetic alternative because of the lack of empirical data to illustrate this possibility and my judgement that an extreme cybernetic solution, not based on decentralization and the use of markets, is not possible in the near future. If I should be proved wrong, then a companion piece dealing with this problem would be very fruitful.

¹E. Neuberger, "Liberianism, Computopia, and Visible Hand: The Question of Informational Efficiency," American Economic Review, LVI, May 1966, pp. 131-144.

²This does not exhaust the possibilities by any means. For the most complete treatment of the alternatives, see Peter J. D. Wiles, The Political Economy of Communism, Chapters 1 and 4.

II. THE CENTRALLY PLANNED ECONOMY¹

OBJECTIVES

Rapid Growth and Industrialization.² Planners in traditional CPEs aim at a very high rate of economic growth, as a rule much higher than the rate maintained in market economies. Not all economic sectors, however, are promoted equally: the result is unbalanced growth. Expansion of industrial sectors is stressed -- more specifically, producers' goods and particularly certain heavy industries such as mining, metallurgy, and machinery production. Attempts to satisfy an ever-increasing demand for industrial outputs lead to a chronic neglect of agriculture, a trend enhanced by the planners' ideological orientation (that is, their mistrust and fear of the peasantry). Unbalanced industrial growth is generally pursued without regard to the relative resource endowment of individual CPEs.

Centralization. This term is a shorthand expression that includes both centralized planning and centralized control of economic activities. Thus, centralization means both that important planning decisions are reserved to the system's directors, and that decisions are communicated to operational units by direct commands or directives. This implies a set of institutional mechanisms whose function is to assure the fulfillment of commands.³ Centralization, it may be added, is at once an important policy objective and a modus operandi of the system (via certain mechanisms to be discussed below). The planners

¹This section was written in collaboration with Alan A. Brown of the University of Southern California. I am grateful to him for permitting me to use it in this Memorandum.

²For a recent discussion of the genesis of the Soviet system's directors' preoccupation with growth, see Joseph Berliher, "The Economics of Overtaking and Surpassing," Henry Rosovsky (ed.), Industrialization in Two Systems: Essays in Honor of Alexander Gerschenkron, New York: John Wiley and Sons, Inc., 1966, pp. 159-185.

³For example, as described in Gregory Grossman, "Notes for a Theory of the Command Economy," Soviet Studies, October 1963, pp. 101-123.

have a revealed preference for centralization per se, pursuing it even at the expense of growth.

KEY ELEMENTS

The basic goals of rapid growth and centralization give direction and shape to the system. The following six key elements represent a relatively complete shorthand description of the CPE.

Socialist Economy (or Social Ownership). According to Western economic terminology, public ownership of the means of production. Although this is one of the independent goals, it is also a means of achieving the goal of centralization, and to some extent the goal of rapid growth.

Command Economy. Centralized bureaucratic management of the economy, with detailed physical planning and supply.

Pressure Economy. Emphasis on a high rate of forced savings at the macrolevel and on tight planning of outputs, inputs, and inventories at the microlevel.

Priority Economy. Planning based on priorities, reflecting the dominance of political and ideological criteria over economic considerations in the overall formulation of economic policy; for example, primacy of industry over agriculture, of producers' goods over consumers' goods, and of material goods over services -- except for high priority of education, especially technical education of the labor force.

Extensive Development.¹ Output-oriented planning, with stress on ever-increasing quantities of output, achieved with massive infusions of labor and capital inputs.

¹This term has gained wide acceptance in Eastern Europe as a shorthand description of the policies followed under the Stalinist system. I am adapting it to describe the specific features described below. See Josef Goldman, "System of Planning and Management," Joint Publications Research Service, Translations on Economic Organization and Management in Eastern Europe 28988, No. 455, March 3, 1965.

Closed Economy. Primacy of domestic economic considerations over the exigencies of foreign trade, foreign trade plans being merely addenda to domestic plans.¹ This is again an independent goal, as well as a means of achieving the goal of centralization.

PLANNING MECHANISMS

Every economic system requires certain mechanisms, or institutional devices, to achieve its basic goals. In a CPE the planning mechanisms are designed to foster rapid economic growth (particularly in the high-priority sectors) and to safeguard centralization. There are three primary mechanisms -- vertical coordination and control, system of material balances, and taut planning -- and three secondary mechanisms -- discontinuous planning, discontinuous incentives, and multiple criteria.

Primary Planning Mechanisms

Vertical Coordination and Control² means a predominant reliance on vertical channels of coordination and control as a basic method of centralization. This emphasis on "vertical connections" (direct orders from above) reflects an effort by the planners to reduce their dependence on the "horizontal connections" (spontaneous, immediate contacts among operational units).³ This mechanism manifests itself in a three-fold separation of economic activities: (i) among different sectors of

¹For a recent discussion of the closed economy element's effect on planning methods, see Herbert S. Levine, "The Effects of Soviet Foreign Trade on Soviet Planning Practices," in A. A. Brown and E. Neuberger (eds.), International Trade and Central Planning: An Analysis of Economic Interactions, Berkeley: University of California Press, 1968.

²Kornai in his "Model of Economic Mechanisms" distinguished between vertical connections ("a matter of authority and subordination") and horizontal connections (which "involve contacts [of an enterprise] with other enterprises. . . [all] . . . having equal legal rights and standing"). Janos Kornai, Overcentralization in Economic Administration: A Critical Analysis Based on Experience in Hungarian Light Industry (John Knapp, trans.), London: Oxford University Press, 1959, pp. 191 ff.

³Kornai said, ". . . these vertical connections are the dominant ones. . . . The influences which result from direct contacts between enterprises are dwarfed by those which reach them from the centre."

the economy (intersectoral separation), (ii) among the enterprises in given sectors (interfirm separation), and (iii) among departments within given administrative or producing units, as within a ministry or firm (interdepartmental separation).

System of Material Balances is a technique to achieve consistency among the various plans.¹ It has two important aspects: (i) physical planning, the balancing of equations in physical units to assure a flow of supplies mainly to high-priority sectors, and (ii) sequential planning, the use of successive approximations rather than simultaneous equations to facilitate the planning process.

Taut Planning aims at the swiftest possible central mobilization of all available resources, by means of continual sellers' markets, to facilitate rapid growth. It also serves as a technique to motivate operational units.² We may distinguish three aspects of taut planning: (i) output (target) maximization, (ii) input (or input coefficient) minimization, and (iii) inventory minimization.

Secondary Planning Mechanisms

Discontinuous Planning may be viewed as an elongation of the Robertsonian "planning day" (or Hicksian "week"), that is, the period during which plans are supposed to remain unchanged.³ This is also a

¹For a detailed description of this method of coordination see Herbert S. Levine, "The Centralized Planning of Supply in Soviet Industry," U.S. Congress, Joint Economic Committee, Comparisons of the United States and Soviet Economies, 1959, pp. 151-176; and John Michael Montias, "Planning with Material Balances," American Economic Review, XLIV:5, December 1959, pp. 963-985.

²The use and usefulness of taut planning was analyzed by Holland Hunter, "Optimal Tautness in Developmental Planning," Economic Development and Cultural Change, IX:4, July 1961, pp. 561-572. Recently Levine gave an evaluation of this method in his essay, "Pressure and Planning in the Soviet Economy," Henry Rosovsky (ed.), Industrialization in Two Systems: Essays in Honor of Alexander Gerschenkron.

³Hicks said, "I shall define a week as that period of time during which variations in prices can be neglected. For theoretical purposes this means that prices will be supposed to change, not continuously, but at short intervals." John R. Hicks, Value and Capital, Oxford: Clarendon Press, 1946, pp. 122-123.

device to facilitate central planning, since the planners attempt to keep relatively long "planning days" (they sanction interrelated plan revisions only infrequently or discontinuously) so as to minimize the burden of planning.

Discontinuous Incentives imply a sharp line of demarcation in the incentive system between success and failure. The purpose is to encourage fulfillment of a centrally specified output pattern. The incentive system is designed to offer rewards if the plans are fulfilled 100 percent (particularly, the physical output plan); failure is defined as falling short of the established quotas. Consequently, little attention is paid to differences of degree.¹

Multiple Criteria mean the absence of a single common standard of value, whether in the planning process (for example, prices) or in the control mechanism (for example, profits).² The tendency to postulate output targets and input norms in non-additive, heterogeneous units is functionally related to the system of material balances (that is, to physical planning). Multiple criteria are also used in assessing the fulfillment of plans, that is, in measuring the performance of operational units. Thus, multiple criteria and the corresponding proliferation of instructions are means of safeguarding central control, although they often do not accomplish this purpose satisfactorily.³

¹Castigating the practice of "turning '100 percent' into a fetish," Kornai said: "premiums are not paid until the degree of fulfillment of the relevant plan index reaches 100 percent." Janos Kornai, Overcentralization in Economic Administration, p. 128.

²"The system of instructions lacks an all-embracing criterion which, at least in theory, is provided by profits in a market economy." Herbert S. Levine, "The Centralized Planning of Supply in Soviet Industry," pp. 170-171.

³"Excessive centralization inevitably leads to an undue proliferation of instructions." Janos Kornai, Overcentralization in Economic Administration, p. 204. "The more instructions are given, the greater the tendency of ministries and other highly placed authorities to 'dictate' and to rely on ordering people about." Ibid., p. 203.

DESIRABLE CONSEQUENCES¹

The CPE is able, at least theoretically, to produce certain effects that, given the preferences of the system's directors, are considered desirable. It should be noted that, in practice, some of these effects are attenuated or altogether negated for reasons to be discussed as we proceed.

Socioeconomic Reorganization

Formation of a New Elite. The system is able to orient the whole country toward the goal of economic development, replacing those uninterested in or hostile to rapid growth and centralization with a new elite of greater reliability. The new cadres are fully committed to the fundamental objectives of the system. This is accomplished by substituting a new ruling ideology for the old, and shifting power to adherents of the new ideology. The change is aided by the key elements cited above, especially social ownership, the pressure economy, and the command economy.

Income Distribution. Social ownership makes economic development possible without resort to a highly unequal income distribution, a precondition usually considered necessary to attain a sufficiently high level of investment from private voluntary saving. In practice, however, the wage differentials needed for incentive purposes and the lack of progressive taxes combine to widen the dispersion of disposable incomes in CPEs.

Population Policy. The CPE, by focusing on economic development and giving power to a new elite imbued with a development ideology, should be in a strong position to deal with one of the most crucial issues facing underdeveloped countries -- the problem of population growth. But none of the key elements of the system deals directly

¹The most comprehensive treatment may be found in P. J. D. Wiles, The Political Economy of Communism, pp. 253-263, where many of the points listed below are discussed at greater length.

with this question, and none of the countries that have adopted such a system has developed a consistent long-term population policy.¹

Mobilization of Inputs

Capital Formation. The elements of social ownership, the pressure economy, and the command economy are used to impose very high rates of forced saving and investment, with the corollary effect of greater capital formation than under alternative economic systems.

Labor Recruitment. Extensive development, the priority economy, and the socialist economy facilitate the utilization of relatively abundant agricultural labor and unemployed urban labor, as well as the recruitment of women into the labor force.

Labor Training. Another desirable effect is the improvement of the educational levels and vocational skills of the population, a goal promoted by both the priority economy and social ownership (since education becomes a more important avenue of social mobility).

Acceleration and Channeling of Economic Development

Growth of GNP. The pressure economy, the priority economy, and extensive development are jointly utilized to achieve a rapid increase of the gross national product, although not necessarily of the standard of living.

Direction of Development. An important function of the priority economy, the command economy, and social ownership is the ability to concentrate on high-priority objectives (for example, giving the lion's share of investment funds to industry, especially to its favored branches) and to bring about a rapid structural transformation of the economy.

Regional Development. Attempts to bring the less-developed regions of the country to the more-developed level -- together with a corollary tendency toward greater socio-political cohesiveness --

¹An excellent discussion of the ramifications of this omission may be found in J. Hoeffding, "State Planning and Forced Industrialization."

are also promoted by the priority economy, the command economy, and social ownership.

Alleviation of Market Imperfections

Externalities. The ability to internalize external economies and diseconomies, while clearly a theoretical effect of the CPE -- particularly of the command economy, the priority economy, and social ownership -- is not easily realized in practice, since central planning organs are not monolithic units and do not have the necessary data and tools to assess externalities accurately.

Restrictive Influences. Social ownership, the pressure economy, and the command economy can be used, with at least partial success, to reduce monopolistic misallocation of resources and organizational slacks by tightly controlling managerial power and severely limiting trade-union interference.

Technological Progress. Control over management and labor and the absence of artificial monopolies based on patents foster a more rapid diffusion of existing technological knowledge. This desirable effect is related to social ownership and certain features of the command economy. Other elements of the system, however -- such as the pressure economy, the closed economy, and extensive development -- tend to work in the opposite direction.

Promotion of Economic Stability

Price-Wage Stabilization. The command economy and the closed economy enable the system's directors to control undesirable price and wage fluctuations. If severe inflationary pressures do build up periodically, as has happened in the past, they can be prevented from affecting resource allocation in part by controlling the wage-price spiral.

Insulation from International Business Cycles. CPEs also have more power than market economies to prevent, at least for a time, external cyclical pressures and disturbances in the balance of payments from dominating domestic economic policies; this is a primary effect

not only of the closed economy but also of the command economy. The system's directors do not feel the need to engage in a stop-go policy of investment and growth, nor have the banks the authority to insist on it.

UNDESIRABLE CONSEQUENCES

We turn now to various undesired consequences of CPEs, rooted in the objectives, key elements, and specific features of the planning system.¹ Although these undesired consequences are interrelated, we may separate them for analytical purposes into four major categories: administrative inefficiencies, unreliable valuation criteria, micro-economic inefficiencies, and macroeconomic problems.

Administrative Inefficiencies

Formal Organization. In its traditional form, the CPE is hypercentralized (that is, its centralization interferes with economic efficiency)² and rigidly organized. Its features, which are embedded in the bureaucratic framework of the command economy, lead to various macroeconomic maladjustments. The absence of flexibility pervades all sectors of the economy, from the Central Planning Board to every subordinate level. It presents serious problems, periodically, in supply (where cumulative shortages can arise because of the unavailability of crucial inputs through legal channels, regardless of prices that firms may be willing to pay) and particularly in foreign trade (where potential gains depend on flexible responses to ephemeral changes). First among the specific problems is an overemphasis on

¹Operationally, it would be difficult to determine whether the emphasis on growth or that on centralization were fundamentally more responsible for the undesired consequences. Although in practice they are joint products, Levine has recently tried to separate the causes analytically, assigning most of the blame to pressure in the system. Herbert Levine, "Pressure and Planning in the Soviet Economy," pp. 269 ff.

²This problem has frequently been discussed in Western economic literature. In his analysis of the Soviet supply system, Levine gave many examples of the macroeconomic maladjustments in the Soviet economy. Herbert Levine, "The Centralized Planning of Supply in Soviet Industry," pp. 167-170. Also, most of Kornai's book is devoted to these problems. Janos Kornai, Overcentralization in Economic Administration.

vertical coordination and control channels (and a corresponding neglect of horizontal links among the enterprises), which increases the need for more information in the formulation and implementation of plans.¹ This, along with discontinuities in planning, leads to (i) lags in administrative response, (ii) the neglect of special requirements or atypical conditions, and (iii) cumulative shortages, which are exacerbated particularly acute by taut planning (for example, efforts to keep reserves as low as possible). Thus, the planning mechanisms not only create initial bottlenecks but also generate further repercussions.

Informal Bargaining. On close inspection, it appears that the CPE, in spite of its highly centralized formal organization, is not a system of rational decisionmaking by an omniscient and monolithic unit. Although vertical command channels are overemphasized officially, the formulation and implementation of plans are pervaded at all levels by bargaining. Results more often reflect the power of individuals than the intrinsic worth of their case, and our attempts to explain or predict the behavior of CPEs may be better served at times by tools of game theory than by traditional economic theories of rational resource allocation.

Unreliable Valuation Criteria

Domestic Prices. There are nonsystematic aberrations of domestic prices both from prevailing scarcity ratios and from planners' preferences,² primarily because several features of the system tend to

¹Evaluating the informational efficiency of the Soviet system, I have argued: "The increasing information intensiveness of the Soviet economy partly explains the search for new economic methods in the USSR." "Liberianism, Computopia, and Visible Hand," p. 133.

²The irrationality of Soviet prices was discussed by Wiles and others in a series of articles during the 1950s. P. J. D. Wiles, "Are Adjusted Rubles Rational?" Soviet Studies, October 1955, pp. 143-160 and replies in Soviet Studies. For a thorough discussion of the Soviet price system, see Morris Bornstein, "A Comparison of Soviet and United States National Product," U.S. Congress, Joint Economic Committee, Comparisons of the United States and Soviet Economies, 1959, Part II, pp. 377-395; and Morris Bornstein, "The Soviet Price System," American Economic Review, LII, March 1962, pp. 64-99.

immobilize the market mechanism.¹ Without a trial and error method, it would be difficult to establish a set of economically meaningful prices for even a handful of basic commodities (for example, to derive synthetic or shadow prices by means of mathematical programming); and, in any case, the problem of the lack of price flexibility would remain. In a centralized economic system, interrelated price adjustments or general price reforms are too costly and can be undertaken only at infrequent intervals. Several key elements of the system -- the command economy, the priority economy, and the closed economy -- militate against rational pricing in a CPE. The inability of the planners to formulate economically meaningful and sufficiently flexible prices may also be directly attributed to certain specific planning mechanisms. First, the emphasis on vertical channels and the corresponding neglect of horizontal connections among operational units slows the transmission and reduces the reliability of information. Second, material balancing, with its stress on quota fulfillment in physical terms, delegates financial accounting to a subsidiary role in the planning process. Third, taut planning and its corollary, periodic supply shortages, inhibit equilibrium pricing.

Exchange Rates. Closely connected with irrational domestic prices is the system of generally arbitrary exchange rates. Both the command economy and the priority economy are to blame, although the closed economy element is chiefly responsible. Although foreign trade decisions are not made primarily on the basis of official exchange rates, the lack of reliable and explicit comparisons between external prices and internal costs tends to interfere with planning as well as

¹Other fundamental problems have been the ideological mistrust and the lack of intellectual appreciation of the market mechanism, but the desire for centralization and the centralized devices of the system are probably the most important reasons for the irrationality of the prices. As Grossman expressed: "But most important, to be workable, a market mechanism would require a dispersion of power and a degree of slack in the economy that the regime may be unwilling to grant." Gregory Grossman (ed.), Value and Plan: Economic Calculation and Organization in Eastern Europe, Berkeley: University of California Press, 1960, pp. 9-10.

control. Arbitrary exchange rates, like irrational domestic prices, are a contributory cause of macro- and microeconomic inefficiencies.

Microeconomic Inefficiencies

Incentive System.¹ Within the pressure economy and the command economy, multiple criteria and discontinuous incentives give rise to a series of problems at the microeconomic level. Both of these aspects of the planning system tend to make incentives dysfunctional: (i) multiple criteria lead to uncertainties, or ambiguous motivation; and (ii) discontinuous incentives lead to an exaggerated schism between success and failure, or dichotomous motivation. The final consequence is an all-or-nothing philosophy. First, up to a point, there are strong incentives for simulation (a familiar manifestation of this is the "assortment problem," the willful misclassification of commodities to show favorable results) and storming (regular seasonal spurts in production to fulfill the quota). Second, when simulation is not likely to help, the performance of enterprises tends to suffer more than necessary because of temporary lethargy and (especially) illicit hoarding, which occurs to facilitate plan fulfillment in subsequent periods.

Productivity. Extensive development, the pressure economy, the closed economy, and the command economy are jointly responsible for various microeconomic inefficiencies: slow rate of technological and product innovation, poor quality of output, and low productivity of labor and capital (long gestation period, inefficient choice of investment or its location, low-capacity utilization because of supply bottlenecks, and inadequate charges for capital use). At the same time, excessive inventories of unneeded inputs and unsold outputs accumulate.

¹The Soviet incentive system was analyzed in detail in Joseph S. Berliner, Factory and Manager in the USSR, Cambridge, Mass.: Harvard University Press, 1957. The book explains and documents various microeconomic problems that are briefly mentioned here.

Firm Size and Specialization. Elements of the command economy, the pressure economy, the priority economy, and the closed economy lead to a pattern of interfirm relationships with (i) a bias toward giant plants with high transport costs and unused capacity, as well as an absence of smaller enterprises needed to provide forward and backward linkages; and (ii) the presence of nonspecialized enterprises, aiming at narrow self-sufficiency, producing many commodities in small series, and engaging in subcontracting as little as possible.

Macroeconomic Problems

Consumer Satisfaction. The priority economy, the command economy, and social ownership tend to keep consumer satisfactions at relatively low levels because of the high rates of forced saving, the low priority of agriculture and consumer goods industries, and the neglect of service industries (which in turn lead to such corollary problems as the wrong assortment of products in terms of type, size, and style, and the unavailability of products in certain localities).

Agriculture. The past collectivization of agriculture and the low priority assigned to it subsequently (keeping agricultural incomes low and making life miserable for peasants) -- the consequences of social ownership and the priority economy -- have caused an exodus of the best workers from agriculture. Although this neglect of agriculture makes extensive development possible and allows increases in industrial output, it nonetheless debilitates long-term agricultural performance, increases social problems in overcrowded cities, reduces the level of consumer satisfaction, and contributes to balance of payments problems.

International Specialization. The closed economy, the command economy, and the priority economy are responsible for the relative neglect of traditional export industries and the failure to develop new specialized export industries based on present or prospective comparative advantage. As a result, CPEs become dependent on the exportation of commodities that happen to be in temporary excess of domestic needs. Similarly, the lack of an optimal long-term import

policy leads to the importation of commodities in temporary short supply rather than those in which the country has a comparative disadvantage.

ADJUSTMENT MECHANISMS

CPEs employ certain adjustment mechanisms in an attempt to deal with the undesirable consequences discussed above. These mechanisms may be divided into external and internal safety valves. The external safety valves, or ad hoc imports, which are often used to alleviate planning errors or unforeseen disturbances, are discussed in some detail in a paper by Alan Brown.¹ By internal safety valves is meant the semilegal mechanisms whose function is to introduce a measure of flexibility into the rigidly centralized system, by means of informal decentralization. Two allied devices, selective violation of instructions and priority planning, are also used to cope with some of the undesired consequences.

Selective Violation of Instructions. Informally, planning authorities are inclined to overlook a case of the neglect of certain instructions by enterprises so long as the more important instructions are observed (chiefly, the fulfillment of physical output plans). There is, as it were, a hierarchy among instructions, the more important ones being safeguarded at the expense of the less important.²

Priority Planning. There is a similar hierarchy among various branches of production, that is, among products of different industries. Thus, priority planning is a means of assuring fulfillments, or over-fulfillments, of high-priority output targets -- ranking high in the

¹See Alan A. Brown, "Toward a Theory of Centrally Planned Foreign Trade," in International Trade and Central Planning.

²Kornai says: "According to what their consequences are, some instructions have much 'authority' and 'weight' and are very effective, while others are of more or less formal importance only, having their existence only on paper. Thus, a definite order of the importance of the tasks which arise in the course of the economic process is formed." Overcentralization in Economic Administration, p. 122.

preferences of the system's directors. This occurs at the expense of low-priority goods -- commodities that the directors consider to be more expendable, at least in the short run (traditionally, agricultural products and consumer goods).¹

¹This process in Soviet planning is described by Herbert Levine as follows: "Another method is the substitution of nondeficit materials for the deficit. Throughout the balancing process, the priority principle is at work." "The Centralized Planning of Supply in Soviet Industry," p. 164.

III. REASONS FOR PROBABLE DEMISE OF THE CPE

For the purpose of justifying the importance of studying the transition problems facing the USSR and Eastern European countries it is sufficient to show that they are entering, or are about to enter, into a transition period to a new economic system. As indicated earlier, this has happened in Yugoslavia, and is beginning in Czechoslovakia and Hungary. However, to argue that a full evaluation of the merits of a CPE as a model for economic development requires a careful consideration of the legacy problem, it is necessary to show that such a system is not likely to last forever or for such a long period as to make the legacies of little importance at any reasonable rate of time discount. I am not suggesting that leaders of underdeveloped countries go around shopping for an economic system. I do believe, however, that a thorough study of the legacy problem, one of the heretofore neglected areas, is important to enable them to get a more complete picture of the relative merit of any given system, Soviet or other.

I shall try to indicate briefly that there are reasons to believe that the CPE is not a "model for all seasons."¹ Just as Marx has argued that the capitalist system digs its own grave, both by its successes, which make it less necessary, and by its failures, which make it less desirable, I shall argue that the Soviet system does likewise. This is likely to be true in a large, well-endowed economy, where domestic factors play the major role, such as the USSR, and the probable

¹A discussion of this topic, by some of the leading experts in the field, may be found in "Soviet Economic Performance and Reform: Some Problems of Analysis and Prognosis -- A Round-Table Discussion," Slavic Review, Vol. XXXV, June 1966, pp. 222-246. Among the innumerable other studies dealing with this subject, let me mention three that argue that a new system is necessary. These are by Soviet, Eastern European, and Western authors. N. Fedorenko, "Vazhnaia Ekonomicheskaiia Problema," Pravda, January 17, 1965, p. 2; O. Sik, "Improvement of System of Planned Management," Rude Pravo, November 22, 1963, pp. 3-6, in Joint Publications Research Service. Translations on Economic Organization and Management in Eastern Europe 26256, No. 369, September 3, 1964, pp. 1-20; and A. Nove, "The Changing Role of Soviet Prices," Economics of Planning, December 1963, pp. 185-195.

life of the system will be shorter in a small, less potentially self-sufficient country, where foreign economic relations play a much more crucial role, such as Yugoslavia or Hungary.

DOMESTIC FACTORS

As an economy develops, the problems faced by the system's directors change greatly. There is a shift from radical, discrete transformations in the structure of the economy, which are necessary in the "takeoff," to smaller marginal changes, which characterize a more mature economy. The greater sophistication of government leaders and technicians makes them more impatient with the crudeness of the Stalinist model, and the larger supply of trained and politically reliable (or at least neutral) managers and staff personnel make decentralization seem more feasible to the system's directors. The increases in income and sophistication of the population lead to a demand for better quality and greater variety of consumer goods and a highly embarrassing accumulation of unsalable stocks of consumer goods. The efficiency of appeals to ideological fervor and promises of future pies in the sky diminish, and the use of totalitarian techniques and extreme pressure tactics in the economic sphere becomes counterproductive.

Hirschman's analogy of the Berlitz model is quite useful in this connection.¹ The Stalinist model is like a teacher of French who, counting on the enthusiasm of the student and his own power of coercion, imposes on the student a rate of learning much greater than the student would voluntarily undertake on his own. This is likely to result in a relatively rapid rate of learning at the beginning, but as the student begins to feel increasingly unhappy at the amount of practice required of him and as he progresses toward the stage of having to learn the fine points of the language, he becomes more and more restive and his rate of learning per hour of practice diminishes. This presents a dilemma to the teacher. If he persists in coercing the student he may face either an open revolt in which the student

¹ Albert O. Hirschman, The Strategy of Economic Development, New Haven, Yale University Press, 1958, pp. 47-49.

refuses to study French, or, even more likely, a situation where the student goes through the motions of studying, but does not learn very much. On the other hand, if the teacher reduces the load on the student, the student may react to it by demanding an even lower load. Once the teacher begins by using the coercive method, he becomes a threatening figure to the student and will have great difficulty in gaining the student's willing cooperation at a later stage. This analogy would seem to describe quite well the situation in postwar Eastern Europe, especially the 1956 Polish and Hungarian "events," and the difficulty Gomulka and Kadar are still having in gaining wholehearted cooperation from their peoples.¹

There are significant changes of an objective type taking place during the process of development under the CPE that combine to make it less and less desirable. There arises a tendency toward a falling rate of growth of national income. There are many possible reasons for a slowdown. A rise in capital/output ratios will require an increased rate of investment in order to maintain a given rate of growth in output. The pressing demands of the population for more and better goods and services will create strong demands for a reduction in the rate of investment and a shift in the allocation of investment resources toward the former "buffer sectors" (agriculture, housing, consumer goods industries, and services). The increased complexity of planning raises the necessary inputs into information and reduces the qualitative and quantitative output effects from information.² The possibility of living off borrowed technology is reduced and research and development becomes essential on a much broader front than earlier. There are increased difficulties even in applying foreign technology as the economy moves from the relatively simpler technology of steel and steel fabricating to the more complex technology of electronic computers and automatic control mechanisms. The benefits of extensive development by massive infusions

¹"Mr. Kadar's Albatross," Economist, October 29, 1966, p. 454.

²E. Neuberger, "Liberianism, Computopia, and Visible Hand."

of unskilled labor decline sharply. The problems of labor incentives and efficient organization of the productive units become more important. The continued lag of agriculture and the difficulties experienced in attempting to plan this sector contribute to the need to find other solutions.¹

All of these make the extensive development, command economy, pressure economy, priority economy, and other elements of the CPE less and less useful as time passes and the economy develops.

INTERNATIONAL ECONOMIC FACTORS

It is probably not too farfetched to argue that, no matter how serious the domestic arguments for an abandonment of the Soviet system, in a small country the problems faced in the field of foreign trade are the crucial ones in forcing changes in the system.² This point has been made by a leading student of economic reforms in Eastern Europe, Gregory Grossman, who has argued that, "to a significant extent all of the recent economic reforms or proposed reforms in Eastern Europe -- though not in the Soviet Union -- have as a main purpose to render the given socialist economy more effective as an earner of foreign exchange and as a gainer from the international division of labor."³

Excruciating dilemmas face the system's directors in their attempts to handle the two major, interrelated problems in the field of foreign trade: the balance of payments problems (total and regional) and the relatively low gains from trade (primarily poor single factorial terms of trade, in some cases poor income terms of

¹A. A. Brown and Y. C. Yin, "Communist Economics: Reforms vs. Orthodoxy," Communist Affairs, January-February 1965, pp. 3-9, make the interesting point that the difficulties faced by central planners in the agricultural and the foreign trade sectors have many similarities.

²We may define as small, for our purposes, any country where a very high degree of autarky would be extremely costly, because of small population, low per capita income, or poor natural resource endowment.

³Gregory Grossman, "Foreign Trade of the USSR: A Summary Appraisal," International Trade and Central Planning.

trade, and poor commodity terms of trade). The most comprehensive and sophisticated analysis of the dynamic changes occurring in foreign trade of CPEs is by Alan A. Brown. A brief summary of his argument will provide the core of this section.¹

Brown discusses the dynamics of centrally planned foreign trade under three dilemmas facing the system's directors: the priority dilemma, the flexibility dilemma, and the trade reorientation dilemma. He argues that the combination of these three generates strong pressures for changes in the system, while creating obstacles to the changes.

The priority dilemma is caused by powerful forces in a CPE making the system's directors averse to foreign trade,² and these forces tend to be stronger than those favoring a large volume of trade;³ however, the dynamics of foreign trade forces the leaders to engage in ever-larger trading activity. This tendency for trade-to-income ratios to rise rapidly is due to the structural changes in both the import and export components. Over time, low priority imports (for example, consumer goods) are gradually reduced, and high priority imports (equipment and raw materials) are increased, thereby increasing the average priority level of imports and making the demand for imports, and therefore the country's offer curve, less elastic. On the export side, domestic low priority goods (agricultural and consumer goods) are pushed into export, which, however, creates a dichotomy in the

¹Alan A. Brown, "Toward a Theory of Centrally Planned Foreign Trade," International Trade and Central Planning.

²In addition to noneconomic factors, the system's directors fear that foreign trade will expose their economies to the vagaries of international markets, with market fluctuations endangering the stability of their plans, they resent the increased complexity of planning caused by an important foreign trade sector, they are unable to calculate the benefits from foreign trade owing to the nature of the price system, and find it even more difficult to establish appropriate success indicators for foreign trade enterprises than domestic enterprises.

³The need to import foreign technology and raw materials for the newly developing industry and the use of foreign trade as a safety valve to mitigate the consequences of short-run disequilibria in the domestic sector are the two major factors favoring a large volume of foreign trade.

priority system (that is, these goods are of low priority when destined for domestic uses, but of high priority when meant for export). Thus, these sectors lose their shock absorbing capacity and one of the traditional adjustment mechanisms, priority planning, is threatened. There is also a tendency for a deterioration in commodity terms of trade (due to poor quality, as well as lack of motivation and ability to accommodate buyers) and a deterioration in single factoral terms of trade (due to the relatively low efficiency of these export sectors). Gradually, the growth of output of high priority industries and the difficulties faced in exporting products of low priority industries leads to an increased proportion of new machinery and similar products in the country's foreign trade structure. However, there is a tendency in many countries for the high priority exports to be more import intensive than is true for the traditional low priority exports. Thus, the increase in exports of high priority goods leads to a rise in imports needed to maintain these exports and there arises a trade expansion multiplier.

The flexibility dilemma, which is based on the conflict between flexible and rigid controls over foreign trade activity by central organs, and the trade reorientation dilemma, which involves the choice between continued dependence on trade with market economies or an even greater diversion of trade to CPEs, do not primarily affect the volume of trade. Instead, they tend to create various types of instabilities and fluctuations in foreign trade, make the conduct of this trade ever more difficult for the system's directors, deprive the country of some of the benefits of foreign trade and cause regional balance of payments problems with hard currency areas. Thus, one might summarize the effect of the three dilemmas: "They are trading more and enjoying it less."

It is beyond the scope of this study to pursue this question any further, since our only purpose is to indicate that problems faced by CPEs in their conduct of foreign trade constitute one of the factors leading to an eventual abandonment of the CPE. A closely related aspect of this problem is the need for a small country to participate

in an international division of labor and the obstacles caused by adherence to a Soviet system. CPEs find it very difficult to integrate their economies into regional common markets or into the world market.¹ The case for participation in an international division of labor is stated most forcefully by a leading Hungarian foreign trade expert, writing in a Yugoslav journal:

International division of labor is called upon to create a basis upon which modern technology can affirm its tremendous, today barely discernible possibilities for the speeding up of economic development. We would go even further: we consider it beyond argument that in the rapid tempo of economic development in the period 1950-1960, the wider international division of labor played a role that is hard to exaggerate and that the development of the majority of countries obtained the major impulses from the arena of the international division of labor in the world market.²

Once a small country's system's directors begin to doubt the value of the centrally planned system and begin to consider the possibility of replacing it with a more decentralized system and one that abandons the closed economy feature, the very considerable advantages of a closer integration into the world market or at least a larger regional market become even more evident.³ Joining an international division of labor brings with it the advantages of specialization according to existing comparative advantage, or more important, the development of new, potential areas of comparative advantage. It makes it possible to capitalize on economies of scale, which the small domestic market did not permit. By acting as a

¹See my two studies, Soviet Bloc Economic Integration: Some Suggested Explanations for Slow Progress, RM-3629-PR, July 1963; and International Division of Labor in CEMA: Limited Regret Strategy, RM-3945-PR, December 1963 (also published in American Economic Review, May 1964, pp. 506-515).

²Imre Vajda, "Privredni Razvoj i Medjunarodna Podoba Rada," Ekonomist, No. 4, 1965, p. 597.

³The dangers inherent in depending on world markets, such as the possibility of long-term falling commodity terms of trade, demand-induced fluctuations in export earnings, dangers of economic or political blackmail, and so forth, have been dealt with in the literature to such a length that little would be gained in discussing them at this point.

countervailing power, foreign trade reduces the ability of monopolistic or oligopolistic giants to exercise their market power. Thereby, it reduces the need to give up the benefits of decentralization in order to maintain some control over these firms. In addition, the competition from firms in more advanced countries is likely to provide a stronger stimulus toward a more rapid rate of technological and product innovation, higher quality production, more cost consciousness, and so forth, over a wide range of economic activities, than the basically administrative methods of the command economy have provided under the Soviet system.

IV. LEGACIES OF THE CPE

The concept of 'legacies' has never been, to my knowledge, explicitly defined in a sufficiently precise way to make it a satisfactory tool of analysis. It is a very complex concept and I do not claim that the following treatment provides more than a small, but important, step in this direction.

We might approach the problem of legacies by classifying them according to (1) the stage of systemic development during which they play an important role. the lifetime of the CPE, the transition period, and the period beginning with the establishment of the successor system, and (2) whether they affect primarily the economic, institutional, or socio-political facets of the economic system.

Those factors that operate primarily during the lifetime of the CPE and the transition from the CPE to a new system might be considered "quasi-legacies." The first type of quasi-legacy operates during the lifetime of the CPE. The establishment of a CPE creates ideological, psychological, political, and economic vested interests on the part of the system's directors and lower level functionaries. It also leads to deficiencies and biases in the statistical reporting system. These combine to make it more difficult for the system's directors to recognize the fact that an abandonment of the CPE would result in improved economic performance, without necessarily depriving them of the ultimate control over the direction in which the economy moves. In addition, the CPE leads to alterations in institutions and mores that considerably narrow the meaningful options of successor systems open to the system's directors.

The second type of quasi-legacy operates during the period of transition from the CPE to the successor regime. Even when the system's directors finally accept the fact that the CPE has outlived its usefulness, a large number of factors tend to make the transition process more difficult and painful. A resistance to change is likely to arise, the introduction of the new system may be delayed, its half-hearted implementation may lead to failures, and the new system may represent a less than optimal compromise between the old and the new.

The "true legacies" are those consequences of the CPE that outlast the CPE and the transition period, and thus constitute the inheritance of the new system. A more precise way of defining the true legacies is as follows: Suppose there are two economies, identical in all respects. One adopts the CPE, and the other remains or adopts a market economy. Both operate for some years with identical environments impinging on them. Then the CPE changes into a decentralized socialist economy making extensive use of markets. All the differences between the two economies, after the transition period has ended, are true legacies.¹

If the argument in Section III is correct, that the CPE does not represent an economic system that is likely to produce satisfactory results indefinitely, then the quasi-legacies can only be negative, whereas the true legacies can be both positive and negative. It is not possible to demarcate the time periods with sufficient precision, and economies are not laboratories where it is possible to hold all other variables constant in order to evaluate the effects of various legacies. Thus, the distinctions between the various quasi-legacies and true legacies are useful primarily in focusing our attention on the relevant factors.

For purposes of exposition, I shall use the second method of classification and divide both quasi-legacies and true legacies into three categories: (1) ideological, political, psychological, and sociological, (2) institutional, and (3) economic, although even here the boundaries are not completely distinct.

POSITIVE LEGACIES

In order to divide the legacies into positive and negative, it is necessary to define the criteria by which the division is made. I am

¹I am indebted to Benjamin Ward for this formulation. See his "Central Planning and Its Legacies: Implications for Foreign Trade -- Discussion," in International Trade and Central Planning.

using the hypothetical preference function discussed in the Summary and in Section II, for this purpose.

Unless the pressure on the population was so severe as to bring about a complete disillusionment and revulsion, the growth-orientation and the psychology of high investment rates are likely to continue into the transition period. This may be considered a major positive legacy; however, it may also have some undesirable aspects. If the country had a relatively developed economy when it adopted the CPE, (for example, Czechoslovakia), then an excessively strong growth-orientation may prove counterproductive. Even in a country that had been underdeveloped, the legacy of growth-orientation could have undesirable effects. If capital/output ratios are rising and rates of growth of output are falling, an attempt to maintain high growth rates requires increases in the rate of investment, at the cost of consumption and exports. In addition, the transition period may be a time for consolidation and not rapid growth.

The new system is likely to inherit a larger capital stock from the CPE than from a system in which the priority economy element played a smaller role. If, as is quite likely, the new capital embodies significant amounts of new technology, the overall productivity of the economy may also be higher. In addition to being a positive legacy in its own right, this could exert a positive influence on both the balance of payments and on the gains from trade, by increasing export possibilities or reducing import requirements.

In addition, the likelihood of a large number of unfinished projects may make the transition period smoother by permitting large increases in output from relatively small incremental investments. However, the unfinished projects may also make the transition more difficult. Their completion may not necessarily be rational on the basis of cost-benefit analyses, but it may be very difficult psychologically and politically to abandon them. In such cases, they will either take resources away from other, more useful projects, or will force a higher rate of investment than may be desirable.

The relatively smaller degree of income inequality, brought about mainly by the absence of private ownership of the means of production, is likely to continue even after the CPE has been abandoned, since it is not probable that the successor system would be one of complete private ownership of all means of production. Private ownership in agriculture, services, and small scale industry is quite likely to be reintroduced, but not in large scale industry or social overhead sectors.

The successor system will inherit an economy that has been transformed from an agricultural to a primarily industrial economy, or has, at least, been started on this road. That is, of course, not necessarily an unmitigated blessing, but would probably be regarded as such by both the leaders of countries now having a CPE and those of present day underdeveloped economies.

If the policy of unifying the country and working toward the greater equalization of regional differences in development was successful, the successor system will find its own job much easier. Its political problems will be reduced and it will be able to concentrate more on economic and other policies. However, recent Yugoslav experience leads to some possible questioning of this optimistic evaluation.

The great emphasis on education, skill training, and transformation of the peasantry into industrial laborers may provide the successor system with some of the most beneficial legacies of all. The increased educational and skill level of the population is likely to raise labor productivity and make possible the operation of technologically advanced branches of production. This is likely to yield favorable legacies in the field of foreign trade, as well as in the domestic economy. It should be noted that it may also create some political problems if the system's directors desire to retain all political power in their own hands.

NEGATIVE LEGACIES

Ideological, Political, Psychological, and Sociological Legacies

Every major economic system is either established by believers in an ideology or develops one during its lifetime. The ruling ideology exercises some influence over the thoughts and actions of the system's directors. It tends to delay their acceptance of the fact that conditions have changed in such a way as to make the system backed by this ideology obsolete. It also forecloses certain reform options, makes the transition to a new system more difficult, and is likely to exert some influence in the new system, as long as this system is introduced from above by the old system's directors.

Every economic system that has been in operation for any length of time is difficult to abandon because of the operation of the principle of inertia and the principle of uncertainty. The existing conditions, no matter how bad, are at least familiar, and the alternatives are always uncertain and therefore likely to be regarded as frightening.

Closely connected to this is the fact that the system builds up a whole set of vested interests. In the case of the CPE, the vested interests consist of party functionaries, government planners, and bureaucrats (who find much of their raison d'être and much of their power in meddling in economic affairs),¹ scholars (who obtained their academic credentials by writing panegyrics to the system and

¹A leading Hungarian economist, in writing about the difficulties of introducing a new economic model in Hungary, states, "The greatest difficulty, whose weight it is difficult to overrate, lies in the fact that, on one hand, the leaders -- in the broader sense of the word, not only a few dozen, but several thousand of them -- have to implement those changes, while on the other, the majority of those leaders have become too used to current methods, and it is difficult for them to change. We have to reckon with this, all the more so as there will be among the modifications some that require methods of leadership different from the previous one, and some of them will require a change of leaders." Istvan Friss, "The Party and Some Important and Topical Tasks of Economic Science," Társadalmi Szemle, August-September 1965, as translated in Radio Free Europe, Hungarian Press Survey, No. 1635, 3 September 1965, p. 17.

many of whom honestly believe in the glory of the system and the correctness of their own theories of the system), and enterprise managers (who have learned the ropes and developed ways to beat the system). These individuals have little to gain and much to lose from the abandonment of a system that has enabled them to rise to leading roles in their respective bureaucracies. There is one other vested interest that is generally not included in such a list -- the workers who may or may not particularly like the system, but who tend to feel the possible threat of a new system very strongly. They fear the possible loss of their jobs, the danger that they will have to work harder in order to earn the same real wage, and the price adjustments likely to accompany the transition, which may result in a lowering of their real wages. Since any reform is likely to be imposed from above, and the workers have good reason to mistrust government actions, workers are quite likely to join the other vested interests in opposing changes, even though the ultimate results of the changes may be to bring about significant improvements in their circumstances.¹ It may not be inappropriate to talk about the CPE creating a "confidence gap" (euphemistically called "reserved trust") between the leaders and the population, thereby bequeathing a significant negative legacy to the successor system.

The CPE turns the individual into an object of manipulation and changes initiative and enthusiasm into apathy and indifference. I would follow Vaclav Holesovsky in arguing that one of the most significant, although seldom mentioned, legacies of a CPE is the destruction of elan vital, a production input for which there is no close substitute.²

¹This is not merely a hypothetical argument, but appears to be a significant factor in the Czech reform attempts.

²Vaclav Holesovsky, "Planning Reforms in Czechoslovakia," paper presented to the Second Annual Convention of the American Association for the Advancement of Slavic Studies, Washington, D. C., March 30, 1967. The reference to "reserved trust" is to Hospodarske noviny, Nos. 51-52, 1966, p. 3, while the reference to the killing of initiative and enthusiasm is to Ladislav Tomasek, "Vztah filosofie a ekonomie a nove zasady rizeni," Planovane hospodarstvi, No. 2, Vol. 18, 1965, p. 26.

The extensive development element and the other elements that lead to lower productivity not only make export expansion more difficult, but also create great pressures against import liberalization on the part of the workers and managers in those enterprises threatened by competition from imports. This has already happened in Yugoslavia.

The CPE breeds an interventionist psychology and an opposition to and misunderstanding of the operation of a market system.¹ This acts to delay the introduction of a decentralized system and makes the transition much longer and more difficult. It results in the introduction of half measures, which are bound to bring more difficulties than solutions, and thereby strengthen the hand of all those opposed to giving up the key elements of the Soviet type of system.²

This interventionist legacy is likely to be particularly strong in the crucial fields of foreign trade and foreign exchange, where because of the other legacies and various exogenous factors, the balance of payments situation will present a serious problem. The balance of payments difficulties will provide a powerful force for the retention of state intervention in this area.

In addition to fostering an interventionist psychology, the CPE also breeds an engineering, perfectionist bias. The adherents of a centralized, command economy believe that it is at least potentially, a perfect system. They oppose a system whose actual performance might surpass that of the actual centralized system, but which can make no claim to ultimate perfection. The analogy of believers in perfect competition may not be inappropriate in this connection. It might be noted that the more extreme and radical any economic system, the stronger will all of these ideological, psychological, and sociological tendencies be.

¹For example, a Yugoslav economist indicated that the city fathers of Zagreb believe that the citizens of their city would starve if they did not assure a sufficient supply of food either by direct administrative action or by setting up a controlled monopoly enterprise.

²The early decentralization experiments in Poland and Czechoslovakia may be viewed in precisely this light.

When and if a successor system is established, it will inherit from the CPE "entrepreneurs" who are not trained to be independent, cost conscious, new product oriented, or particularly concerned with financial liquidity or solvency. Neither are they likely to be experienced in those skills essential to selling in a competitive world market or a competitive buyers' market at home.¹ On top of all this, they are likely to be oriented toward short-run maximization of their utility functions and not concerned with the more difficult problem of operating with a long time horizon.²

Although I have included the possibility of a continuation of a psychology favorable to high rates of investment under positive legacies, it does have its negative effects, too. The transition period from the Soviet system is subject to a serious danger of inflation and balance of payments deficits. A continued high rate of investment demand, beyond the capacities of the domestic investment goods industries and of the construction industry, will greatly enhance this danger and lead to demands for a return of the instruments of the command economy.

Both planners and managers in the Soviet system appear to have a preference for investment in fixed capital rather than working capital, since they feel that the former is more productive. In making up the plans, planners, operating on the taut planning principle, underestimate the needs for accretions to inventories. Managers, fully aware of the need for large inventories to counteract the poor functioning of the supply system, depend on bank credit to finance these inventories.

¹The London Economist presents a very interesting example of this problem. The technical manager of the Bucharest Machine Tool Factory argues that his plant uses predominantly modern West German and Swiss equipment, gets the most qualified workers by paying them high wages, and produces a product of high quality. However, the cumbersome centralized planning system and the lack of an advertising and sales department have prevented his firm from successful competition in world markets. Economist, December 3-9, 1966, p. 1022.

²Gottfried Haberler argues that this may represent the most significant negative legacy of a CPE. See his "Theoretical Reflections on the Trade of Socialist Economies," International Trade and Central Planning.

Banks, operating on the "real bills" doctrine, tend to satisfy this need. If, as has happened in Yugoslavia, this preference on the part of enterprises continues after the demise of the Soviet system, it presents the system's directors with some unpleasant alternatives and a task of reeducating enterprise managers. Once the strong direct controls of the command economy are removed, there is a danger that bank-fed working capital accretions, by freeing enterprise resources for fixed investment, may have inflationary consequences. On the other hand, a restriction of bank credit, in a situation where enterprises have completely insufficient working capital funds of their own, results in serious cuts in output and increases in unemployment. What makes this problem more unpleasant is that even if an attempt is made to control bank credit extension by refusing credit only to the poorly functioning enterprises, the effect will quickly spread to their suppliers who may have been operating very well, thus starting a spiral.

The physical planning and taut planning aspects of the CPE lead to a sellers' market and a system of incentives for production and not sale. This results in a situation where enterprises pay relatively little attention to quality, timely deliveries, and after-sale servicing or warranties on their products. In addition, monetary fines are not very effective instruments for countering this attitude since the payment of fines does not affect incomes of managers very significantly. This makes contracts much less effective than they are in market economies. This situation does not change very quickly, even after the physical planning and taut planning are no longer in existence.¹ This legacy is particularly harmful in the field of exports and constitutes one of the major reasons a country like Yugoslavia finds it difficult to promote the exports of its industrial products on highly competitive convertible currency markets.²

¹D. Vukovic, "Dueli Koncar-Natronka," Borba, September 26, 1966, p. 5.

²A high official in the sales department of a major Yugoslav industrial firm explained the inability of the firm to export to the United States market in large part by the fact that it is not able to meet the strict delivery terms required by most U.S. importers. His explanation was

As indicated earlier, the priority economy, pressure economy, and command economy elements combined to yield a legacy of investment projects that had not proved to be economically sound. When this legacy is combined with the unwillingness to admit mistakes, especially big mistakes, the successor system inherits some white elephants that are continually nurtured at the expense of the rest of the economy. The need to devote investment resources to these white elephants, and the retention by them of scarce managerial and technical talent, make more difficult the development of those sectors of the economy that could participate effectively in export activity. The Yugoslav experience is quite instructive in this connection; to the best of my knowledge, no large industrial firm has yet been liquidated, although there appears to be no shortage of candidates. Considerable opposition to the substitution of open unemployment for the disguised unemployment created by the extensive development under the CPE adds further weight to the opposition against closing down any large enterprises.¹

Institutional Legacies

One of the major legacies of the CPE is a price system divorced from both domestic and foreign scarcity relationships. This "irrationality" is troublesome during the life of the system, but becomes much

that a part of the problem lies in possible bottlenecks in the production process of his own firm, but that the major blame must be placed on late deliveries by its suppliers. In the case of inputs from domestic sources, contracts were often not met, and in the case of imports, the fault generally lay not with the foreign exporters but with the difficulties in obtaining the necessary foreign exchange on time.

¹In a public opinion poll conducted in Yugoslavia following the introduction of the 1965 reforms, workers were asked what they believed should be done with enterprises that operated for a long time with losses and whether they would advocate firing excess workers. To the first question, 36 percent said that such enterprises should be liquidated, 35 percent that they should be merged with successful enterprises, and 16 percent that they should be helped to continue. To the second question, 48 percent answered that excess workers should be fired, 45 percent opposed firing anyone, and 74 percent of all workers said they were willing to give up part of their income to prevent the need for firing anyone. Mijat Damjanovic and others, Jugoslavenko Javno Mnenje o Privrednoj Reformi 1965 Godine, in Godisnjak 1965, Institut Drustvenih Nauka, Belgrade, 1966, pp. 131-132.

more so when attempts are made to decentralize the system and introduce market elements. The gingerly way Liberman and other Soviet economists have handled the price problem is quite symptomatic of this. As will be shown in the section on Yugoslavia, reforming a price system to make it reflect scarcities is one of the truly difficult tasks faced by those attempting to replace a CPE with a new system. Radical changes in relative prices of inputs and outputs affect the income distribution among regions, among branches of the economy, among firms within a given branch, among workers in a given enterprise, and among different classes of consumers. Even the fiscal agencies at the national and local levels are hit by changes in indirect taxes, necessitated by price changes, and by changes in prices of the goods and services they purchase. Of course, the further out of line the prices are, the more difficult is the process of realignment. The continuation of such prices after the initiation of the transformation of the economy toward a decentralized market system results in the continued need for various fiscal or other government instruments to prevent the prices from leading to a misallocation of resources in export or import activity.

A much less difficult, but not insignificant, problem is presented by the need to alter unrealistic exchange rates. A change in exchange rates without a thoroughgoing reform of domestic prices does not solve any of the important problems. Yugoslav devaluations in 1952 and 1961 managed to get the average dinar/dollar rate temporarily closer to the average purchasing power parity of the two currencies, but the dinar/dollar rates for individual products were still very much further out of line than in most market economies without a legacy of an "irrational" price system.

Closely connected with the existence of unrealistic, generally overvalued, exchange rates is a highly centralized foreign exchange system. The dismantling of such a system is one of the more difficult tasks of the transition period. Despite the reforms in 1952, 1961, and again in 1965, strong elements of central control over foreign exchange still exist in Yugoslavia. There appear to be two main explanations for this: (1) the difficulties in expanding exports sufficiently to

assure balance of payments equilibrium make foreign exchange very scarce. This requires strong control over it, unless the leaders are willing to adopt a system of flexible exchange rates, and (2) in the Yugoslav case, the foreign exchange system appeared to have been one of the last bastions of strength for those elements opposing decentralization.

An admittedly secondary cause of continued balance of payments problems is the difficulty in adapting the organizational network in foreign trade to the needs of a decentralized economic system. It is not possible overnight to alter a bureaucratic system of foreign trade monopoly into an appropriate network of foreign trade organizations. It is easier to decree the organizational changes than it is to retrain the personnel and create a flexible and efficient network at home and abroad. Connected with this is the difficulty in shifting from a pattern of trade dependent on bilateral clearing arrangements to one of flexible, unplanned, market relationships. Furthermore, since a continuation of the bilateral arrangements has some advantages to a country that has depended heavily on them, they are likely to be continued. This then necessitates some types of controls to assure the fulfillment of the quotas agreed upon in the trade agreements and prevents an abandonment of exchange and trade controls over enterprises.

A probably more important institutional change that is required in order to make a decentralized market system operate effectively is the creation of a satisfactory mechanism for the transfer of investment resources from those who do the saving to those who do the investing, that is, the need for some type of capital market. Unless some satisfactory mechanism is developed to replace the centralized system of investment allocation, no truly decentralized economic system is viable. The creation of a capital market or the reestablishment of one that has been dismantled is a very difficult, time-consuming process under any circumstances, and the legacy of the Soviet system is that this process will begin much later and under much less favorable conditions.

The social ownership element, which is probably the one element that is most unlikely to be abandoned completely, creates serious barriers to the working of an effective capital market. This is true even if the Marxist view of capital as unproductive is given up. The problem is not how to move the savings of private individuals into the hands of investors, since these represent a very minor part of total savings, and since interest on savings deposits is for some reason considered acceptable. It is rather how to give enterprises the right to retain sufficient resources to make their independence meaningful, and at the same time provide for a mechanism to stimulate enterprises whose retained earnings plus depreciation exceed their profitable investment opportunities, to make these resources available to other enterprises who could use them more profitably.

Two main alternatives are giving the lending enterprises high rates of interest or giving them a share in the profits of the other enterprise. Aside from the obvious ideological problems involved in letting enterprises benefit from giving other enterprises the use of what is really socially owned capital, there is also the need for some effective institutional framework within which such transfers can be arranged. One obvious candidate for this task is the banking system. However, here again the legacy problem arises, since under the Soviet system, banks are organized as bureaucratic entities supposed to act as handmaidens to the planners. Neither the organizational set-up nor the training of the banking personnel makes the banking system very effective as a potential kingpin of the capital market.¹ Furthermore, even if the banks begin to act as banks do in market economies, this would not fully solve the problem. Banks are generally not the suppliers of high risk venture capital and justifiably so.

According to Yugoslav economists with whom I have spoken, the irrational price system, the centralized foreign exchange system, and

¹For a discussion of the functions performed by banking personnel in the Soviet Union, see E. Neuberger, "Banking in the Soviet Union: An American View," The Bankers Magazine, Vol. 148, No. 1, Winter 1965, pp. 28-39.

the lack of a capital market are among the most damaging legacies in Yugoslavia.

The nationalization of all private property in the means of production under an extreme Stalinist system, such as the Soviet one, leaves the successor system without any private sector, with the minor exception of collective farm household plots. A less extreme version, such as the Polish one, permits private ownership in agriculture, small scale handicrafts and certain services. It is beyond the scope of this study to deal with the relative merits of collectivized agriculture and private agriculture or socialized versus private industry. The only point to be made is that in certain activities privately run enterprises tend to be much more efficient and much more likely to provide the customer with what he wants than will socialized enterprises, so that the absence of such enterprises may be considered a negative legacy.

Economic Legacies

In a CPE the emphasis is on domestic factors and foreign trade is relegated to an ancillary position, with imports consisting of commodities necessary for fulfillment of domestic production plans and exports consisting primarily of those commodities in which there is a temporary surplus. This means that no special effort is made to develop any important export sectors and that the human and material capital stock is not likely to be suitable for purposes of a rapid inclusion into an international division of labor. A Yugoslav economist, writing in 1966, stated:

The planning system itself is relatively responsible for the still present elements of autarchic, closed economy. The starting point of our planning used to be, predominantly, internal balance sheets, which inevitably created, or at least tended to create, a closed, "balanced," self-sufficient economic structure. Exchange with foreign countries was mostly reduced to the exports of surpluses and imports of deficits (from the viewpoint of the internal material balance sheets). No systematic and resolute orientation toward fitting our economy into the international division of labour existed, even in those instances where either present or future comparative advantages could have been estimated. The result

is well known: the insufficient exports, and consequently imports potential of the Yugoslav economy and a persistent deficit in the balance of current account, slowing down the rate of economic growth.¹

The absence of effective export sectors is one of the factors explaining the generally low levels of foreign exchange reserves, an inconvertible currency, and either a balance of payments deficit or a balance in international accounts purchased at the cost of a low export/income ratio and a less than optimal geographic pattern of trade. As shown by A. A. Brown, the dynamic changes during the operation of the CPE are likely to yield a legacy of a highly inelastic offer curve, because of a low price elasticity of demand for imports (as imports tend to contain an even greater proportion of higher priority products) and a low price elasticity of supply of exports (because of the aversion of planners to alter plans in order to change the amount of goods available for export and because as the priority of products entering exports rises, there is an even greater unwillingness to respond to possible increases in export prices by increasing export quantities). The income elasticity of demand for imports is likely to be high because of the operation of the trade expansion multiplier. To maintain a balance in international accounts, this will cause a high income elasticity of demand for foreign exchange, which forces an expansion of exports. This is true even though planners will not willingly release goods for export, since their cost, in terms of planner's preferences, will rise as more high priority products must be exported.²

¹ Milan Mesaric, Notes on the Yugoslav Planning System, Ekonomski Institut, Zagreb, 1966, pp. 2-3. Another Yugoslav economist makes a similar point and argues that it was only in 1967 that the first significant step was taken to include the criterion of foreign exchange results as a major factor in investment policy, and that even as late as the middle 1960s, emphasis is still being placed on short run balance of payments effects instead of concentrating on the long run development of those sectors of the economy in which there is present or probable future comparative advantage. Dobrivoje Miskovic, "Investicije i Platni Bilans," Ekonomika Preduzeća, XIII. No. 7, 1965, pp. 476 and 480.

² Alan A. Brown, "Toward a Theory of Centrally Planned Foreign Trade."

The probability of suffering from regional balance of payments problems in the transition period and the early stages of the successor regime can be evaluated in terms of Hirschman's concept of "exportability."¹ The relatively low degree of "exportability" of the rapidly growing sector under the CPE, that is, primarily the investment goods sector, explains the difficulties experienced in trying to export to convertible markets. (1) The country does not find it easy to supply, at competitive prices, goods comparable to those already sold in convertible markets, (2) it does not have many goods that are new and superior, and (3) the rapidly growing sector corresponds to the slowly growing sector in most underdeveloped countries, but to the rapidly growing sector in the advanced industrial countries.

The pattern of development under the CPE works against the country becoming overly dependent on a monocultural export industry and this may be considered as one advantage of this approach. However, although considerable effort has been given in the literature to an analysis of the dangers of excessive specialization, little attention has been devoted to the danger of a completely home-market-oriented development, with excessive diversification of exports, which may be one of the legacies of the CPE. In this system, despite an aversion to foreign trade, imports are likely to be very important as providers of new technology and scarce raw materials, and as a safety valve in case of failures in the domestic planning system. Exports, aside from some traditional agricultural exports whose importance gradually declines, are likely to be commodities that are produced for the home market and happen to be in temporary excess supply. In the absence of sectors specialized for exports, the need to pay for imports forces the government to use a whole battery of administrative or indirect instruments to stimulate the export of all types of goods, regardless of their suitability for export. This leads to great diversification

¹ Hirschman, The Strategy of Economic Development, pp. 169-171.

of exports as more and different types of goods are pushed into export markets.¹

The legacies of this approach are: (1) Inferior single factoral terms of trade, as only limited effort is made to benefit from specialization or economies of scale. (2) No assurance of dependable sources of foreign exchange earnings in the long run, which forces the successor system to try to develop such sources. (3) The absence of important export products makes it impossible for the country to gain significant benefits in tariff bargaining or in negotiations leading to entry into a regional economic union. (4) The concentration of firms on selling in the domestic market, which makes lesser demands in terms of quality, new products, packaging and finishing, and so forth. This makes it very difficult to stimulate them to abandon the domestic market or the less exacting clearing area markets for the much more demanding convertible area markets. (5) This is reinforced by the absence of a compulsion to develop expertise in export marketing, which results in a lack of trained personnel and tested policies. And (6) no constituency is built up in favor of exports, since few firms specialize in this field.

Closely connected with the issue of commodity diversification is the concept of capillarity.² Pertot describes this concept as follows:

... our surpluses available for export, singly and in toto, turn out to be so small on the world scale, that in given cases they are often able, as if by the principle of capillarity, to find access and exit on world markets through the tiny pores of the world economic fabric, and that in doing so, in many cases not only do not threaten anyone's economic

¹A study of concentration in international trade showed that Yugoslav exports were highly diversified. Yugoslavia ranked 38th out of 44 countries, and the countries with lower coefficients of concentration were industrially developed countries of Western Europe and the United States. The study did not include any data on Soviet economies. Michael Michaely, Concentration in International Trade, Amsterdam: North-Holland Publishing Company, 1962, p. 12.

²A discussion of diversification and capillarity in Yugoslavia may be found in Vladimir Pertot, "Neke osobenosti u strukturi i geografskoj usmerenosti naseg izvoza," Ekonomist, No. 3, 1960, pp. 380-426; and "Elementi za utvrdjivanje nekih specifinih osobenosti u nasem izvozu," Ekonomist, No. 4, 1960, pp. 617-661.

interests, but our foreign trade partners are not even¹ conscious of such additional exports from our country.

Thus, capillarity means, in effect, that the country finds itself in a position similar to that of a pure competitor facing a perfectly elastic demand curve.

Although commodity diversification has important advantages and costs, capillarity's advantages clearly outweigh its disadvantages. The country is less subject to political blackmail or to economic changes in one particular trading partner, it faces a more elastic foreign offer curve, which permits an expansion of exports without deterioration in the commodity terms of trade, and it has no need to invest in market surveys, trade networks in foreign countries, advertising, and so on. However, the negative legacies from a policy based on capillarity are: lack of expertise in specific markets resulting in an inability to take advantage of favorable market conditions in a foreign market when these arise, and higher administrative and transportation costs for shipping many different items to many different markets.

The priority principle of the CPE results in two very important legacies: the need to compensate for the highly unbalanced investment structure and the likely danger of the eruption of open inflation. The concentration of investment resources and of the best trained and most effective human resources in the priority sectors in the CPE imposes on the successor system the burden of having to make major investments in material and human resources for the former buffer sectors, such as agriculture, housing, and consumer goods industries. Since even the producers' goods industries may have an unbalanced structure, investments might be necessary to develop those that were relatively neglected earlier, for example, chemicals. Thus, the success achieved by the operation of the priority principle is at least partly negated by the need to compensate for some deficiencies in the capital stock structure.

The CPE has a tendency toward operation under a condition of repressed inflation. When attempts are made to relax the controls of

¹Ibid., p. 382.

the command economy, open inflation threatens and there appears a very strong temptation to impose stringent price controls.¹ The imposition of such controls will delay the introduction of a new market system or emasculate its effectiveness. The danger of an initiation of open inflation is heightened by the need to realign relative prices, since it is usually easier to raise input and output prices than to lower them, and this is especially true of wages. This tendency is likely to be enforced by the need to raise food prices to provide incentives to the peasants. Unless the exchange rate is realigned before the command economy is dismantled, the devaluation itself is likely to put pressure on the price level. Any inflationary pressure will, of course, place additional strain on the balance of payments.

¹As indicated in the next section, this is precisely what happened in Yugoslavia.

V. THE YUGOSLAV EXPERIENCE

A significant proportion of the Yugoslav economists believe that the legacy problem has been an important contributory cause for the adverse, and possibly also for the important positive, developments in the Yugoslav economy since 1952.¹ However, neither these economists nor I would argue that the legacies are a sufficient or necessary condition for explaining all the developments in the Yugoslav economy from 1952 to 1967.

THREE YUGOSLAV STATEMENTS ON THE LEGACY PROBLEM

Vladimir Bakaric, the leader of the League of Communists of Croatia, and a leading liberal statesman, presents the essence of the dilemma faced by the system's directors in a country that adopts the CPE and then attempts to replace it with a new, more suitable system.

. . . The first [issue] is the obvious fact that disproportions keep accumulating, and that the longer the old relations are kept, the more disproportions will arise and it will become ever more difficult to control them. The giving of "freedom by the spoonful" does not present the possibility of a solution for the simple reason that there have been established such relationships that partial attempts, measures that retain as dominant the existing, in essence administrative methods of running [the economy] can no longer provide a solution. Such a method actually means only the postponement of a solution. On the other hand, if suddenly we were to leave everything to automatism, to permit such a conflict of forces that would lead to the elimination from our economy of all that according to its present capabilities could not exist, it is most likely that the depth of disproportions created up to this time would show up so forcefully that the question would arise whether we could stand by and let the process take its full course. . . . It is most likely that, in the very fact that it is relatively easy to see the whole difficulty of getting out of the

¹The whole brunt of the so-called "White Paper" written in 1962 was that the problems faced by Yugoslavia during the 1961-1962 economic difficulties were due primarily to the incomplete removal of the vestiges of the old system. "Materijali sa Savjetovanja Naucne Sekcije Saveza Drustava Ekonomista Jugoslavije," Zagreb, 18-20 January 1963, Ekonomski Pregled, No. 3-5, 1963, pp. 147-299.

situation is hidden the cause of the inclination toward interventions which in fact means the solidifying of the old system. Such an approach, in any case, does not provide the basis for a solution of the problem. Difficulties that are in their essence the product of the old system cannot be overcome with methods suitable for that system. Meanwhile, the periodic aggravation of one of the basic disproportions -- the deficit in the balance of payments -- shows that it is no longer possible to depend on measures that do not lead to a more rapid solution of the structural problems of our economy. Moreover, the ever shorter intervals between balance of payments difficulties show that it is becoming dangerous to postpone deeper and bolder actions, with the adoption of classical measures, and especially with the help of foreign credits; these methods and these resources should be utilized to make such changes in the economic system and in exchange with foreign countries that will initiate the process of the liquidation of disproportions on the basis of a greater productivity of labor. This means that we must move toward freer economic relationships, and in these newly created conditions intervene to prevent the disproportions from having too brutal consequences. More precisely: change over to a system of freer action of economic laws with the possibility of regulation.¹

A statement by two Yugoslav economists, published in 1965, emphasizes the continued existence of significant legacies, even at that late date:

. . . our whole economic system is unfinished, so that one should regard it more as a transitional category which contains in itself elements of the old and the new (we suppose future). Under the new form there often hides the old content, so that, objectively regarded, that which is old in the present system is more than dominant.²

Yugoslavia's chief ideologist and President of the National Assembly, Edvard Kardelj, argued in an interview published shortly after the introduction of the 1965 reform that the current troubles

¹Vladimir Bakaric in an interview in Ekonomska Politika, October 10, 1964, quoted in K. Dzeba and M. Beslac, Privredna Reforma: Sto i Zasto se Mijenja, Zagreb: Stvarnost, 1965.

²Drago Gorupic and Ivo Perisin, "Prosirena reprodukcija i njeno financiranje," Ekonomski Pregled, No. 2-3, 1965, as quoted in Dzeba and Beslac, p. 58 (emphasis added).

. . . lie in the fact that the whole of our system is still burdened with excessive state intervention. . . . In the sphere of expanded reproduction, the financing of international trade, that is, in the foreign exchange system, in the credit system, and so forth, the old system still exerts its influence, that is, there exists excessive state intervention.¹

BRIEF STATISTICAL SURVEY

A brief statistical survey of Yugoslav economic development serves to place the problem in its proper perspective. Looking at the rate of growth in national income and industrial output, it appears either that there is no legacy problem, or that the positive legacies outweigh the negative ones by a considerable margin. When the balance of trade and balance of payments are considered, the opposite impression is gained.

Yugoslav national income grew from 11.5 billion new dinars (in 1960 constant prices) in 1947 to 14.8 billion new dinars in 1951, fell to 12.8 billion new dinars in 1952, rose back to 15.1 billion new dinars in 1953, and then grew steadily, with only one minor interruption, until it reached 38.5 billion new dinars in 1965. The rates of growth were 6.5 percent between 1947 and 1951, 2.1 percent between 1947 and 1952 (1952 was an extremely poor harvest year), and 7.9 percent between 1953 and 1965 (1952 was eliminated, since it would have shown a more rapid rate of growth than warranted). For the period from 1947 to 1965, the rate of growth was 6.9 percent.²

¹Edvard Kardelj, *Borba*, November 27, 1965, as reported in Radio Free Europe, Yugoslav Internal Affairs, 30 November 1965.

²The rates of growth were calculated in the usual manner of getting the compound rate of yearly growth between the beginning and terminal year, since no more sophisticated measure seemed necessary for our purposes. Yugoslav statisticians have some qualms about the quality of these statistics, especially about the price deflators used to obtain the series in constant prices, but I believe that even the most sophisticated recalculations would not change the results sufficiently to prevent the Yugoslav economy from appearing as a very dynamic one. The use of 1960 prices as the base, rather than 1947 or 1952 prices, eliminates one of the major sources of upward bias in an economy that is being rapidly transformed. The rates of growth were calculated from

An even more dynamic picture is presented by the industrial component of national income, which had an average growth rate of 11.9 percent a year from 1952 to 1965.¹ A slightly different set of data presenting the indexes of physical volume of industrial output shows a growth rate of 12.4 percent for that period.² However, during the earlier period, in good part because of the wrenching effect on the economy of the break with Stalin, the industrial output grew very rapidly from 1947 to 1949, but then stagnated until 1952, giving a rate of growth of 6.5 percent a year for the whole period during which the CPE may be considered as having held full sway in Yugoslavia.³

Agricultural output fluctuated very widely during the whole period, and showed no long term trends during the Stalinist period. After de-collectivization, the agricultural component of national income grew at the rate of 4.3 percent a year from the average of 1952-1954 to the average of 1963-1965.⁴

The performance of the Yugoslav economy presented here is impressive, but the picture is not complete. The rapid growth of output was based, in large part, on the use of extensive development, that is, very high rates of gross investment and large scale additions to the industrial labor force. For the period 1952-1963, Rockwell has calculated the exponential growth rates of value added in the total social sector of the Yugoslav economy at 9.9 percent a year, with capital

data in Jugoslaviya, 1945-1964, Statisticki Pregled, Belgrade: Federal Statistical Administration, 1965, p. 77, and Statisticki Godisnjak SFRJ 1967, p. 105.

¹Jugoslaviya, 1945-1964, p. 78; and Statisticki Godisnjak SFRJ 1967, p. 105.

²Jugoslaviya, 1945-1964, p. 77; and Statisticki Godisnjak SFRJ 1967, p. 105.

³Ibid.

⁴By taking three year averages, it is possible to reduce somewhat the effect of particularly good and particularly disastrous harvests. Calculated from Jugoslaviya 1945-1964, p. 78; and Statisticki Godisnjak SFRJ 1967, p. 105.

inputs growing at 0.2 percent and labor inputs at 7.2 percent a year.¹ In the industry and mining sector, during that same period, value added grew at 11.3 percent, capital inputs at 8.2 percent, and labor inputs at 7.1 percent.²

More important, the favorable picture of Yugoslav growth does not take into account the very great contribution of foreign economic aid and the inflow of foreign government loan capital, which permitted Yugoslavia to run a large import surplus during the whole post-Stalinist period.

Table 1 presents the balance of trade for the whole postwar period. It is clear from this table that the picture of Yugoslavia as seen through its foreign trade is quite different from the picture presented by the data on national income and industrial output. It is thus not surprising that foreign trade has been one of the sectors that has most troubled Yugoslav leaders, although by no means the only one.

The picture is considerably better when the balance on current account, including invisibles, such as tourism, transport, and emigrants' remittance, is considered, rather than merely the merchandise balance. In every year, Yugoslavia had a positive balance in these items and part of the import surplus was financed by these invisibles. In 1962 and 1963, the invisibles covered 58 percent of the import surplus, in 1964 they covered 46 percent, and in 1965 they actually covered more than 100 percent and for the first time since 1949, Yugoslavia had a surplus on current account.³

CONTROLS OVER PRICES

There are many possible legacies that are worthy of attention, such as the difficulties encountered in Yugoslavia in trying to

¹ Charles S. Rockwell, "Product Growth and Factor Inputs in Yugoslavia: Some Cross-Sectional Results," paper prepared for the American-Yugoslav Seminar, Belgrade, 4-9 July 1966, Table II, p. 5a.

² Ibid., Table III, p. 6a.

³ Statisticki Godisnjak SFRJ 1967, p. 115.

Table 1

BALANCE OF TRADE OF YUGOSLAVIA, 1947-1966
(in millions of new dinars, at the exchange rate
of 12.5 new dinars = \$1)

Year	Exports	Imports	Balance of Trade	Exports/ Imports
1947	2,046.1	2,075.9	- 29.8	98.6
1948	3,711.8	3,831.0	- 119.2	96.9
1949	2,483.7	3,685.2	-1,201.5	67.4
1950	1,929.4	2,883.4	- 954.0	66.9
1951	2,234.0	4,796.4	-2,562.4	46.6
1952	3,081.5	4,663.4	-1,581.9	66.1
1953	2,324.7	4,941.2	-2,616.5	47.0
1954	3,004.7	4,242.4	-1,237.7	70.8
1955	3,207.3	5,511.9	-2,304.6	58.2
1956	4,042.1	5,926.7	-1,884.6	68.2
1957	4,938.8	8,266.3	-3,327.5	59.7
1958	5,517.4	8,562.5	-3,045.1	64.4
1959	5,958.0	8,589.7	-2,631.7	69.4
1960	7,076.9	10,329.7	-3,252.8	68.5
1961	7,111.1	11,378.4	-4,267.3	62.5
1962	8,631.0	11,096.5	-2,465.5	77.8
1963	9,879.3	13,207.8	-3,328.5	74.8
1964	11,164.4	16,539.7	-5,375.3	67.5
1965	13,643.8	16,099.4	-2,455.5	84.7
1966	15,251.0	19,692.9	-4,441.9	77.4

Notes:

Imports are cif, exports fob Yugoslav border.

From 1951 on, imports include goods financed by foreign economic aid and U.S. agricultural surpluses; these unrequited imports ranged between 0.7 and 1.7 billion new dinars, thus covering a significant proportion of the deficit in the merchandise account, or putting it differently, making possible an excess of imports over exports.

Statisticki Godisnjak 1966, p. 213.

Source:

Statisticki Godisnjak SFRJ 1967, p. 204.

decentralize the banking system and make it act on market principles,¹ the efforts to change the structure of investments, the struggle against inflation and the realignment of relative prices, the effort to dismantle the administrative system of foreign exchange controls, and so forth.²

However, I shall deal with only two legacies, both of which have great significance for foreign trade -- the problem of the irrational price system and the problem of the foreign trade and exchange system. One of the most vivid illustrations of the difficulties encountered in Yugoslavia in attempting to shift from the CPE to a system of market socialism is the persistence, even the increase, in the proportion of the output sold subject to controls over prices. This is graphically portrayed in Table 2. There was an apparent rise in the proportion of goods subject to price control from 1958 to 1962, with a slight decrease in 1961. Furthermore, in connection with the 1965 reform of the economic system, the Yugoslav regime imposed a very broad price freeze, thus providing for a very comprehensive and direct control over prices. Despite these controls, the cost of living index still more than doubled between 1952 and 1964, even according to official statistics.³

PRICE DISPARITIES

The CPE's command economy and closed economy elements caused significant divergences between domestic prices and prices on world

¹For example, President Tito stated at the beginning of 1967, "The banking system is still not good. I do not know of a single bank that has completely adapted itself to the intentions of the Economic Reform [of 1965]." Statement made on TV series "Current Topics," and reported in Yugoslav Facts and Views, No. 18, January 17, 1967.

²Let me mention a caveat at this point. I do not, of course, claim that if some feature of Yugoslav economic history since 1952 fits into my general discussion of the legacy problem, it is a legacy from the Stalinist period in Yugoslavia. All I am arguing is that such features illustrate some possible aspects of the legacy problem and lend some support to my claim that this problem is worthy of study.

³Jugoslavijska, 1945-1964, p. 235.

Table 2
VALUE OF OUTPUT SUBJECT TO PRICE CONTROL^a
(percent)

Branch	1958	1961	1962
Total industry	31.2	28.6	67.0
Electric energy	100.0	100.0	100.0
Coal	97.0	97.0	76.2
Oil	42.3	54.5	96.0
Ferrous metallurgy	100.0	100.0	100.0
Nonferrous metallurgy	41.2	27.4	93.0
Nonmetals	0.0	0.0	70.6
Metal fabricating	0.0	0.0	51.6
Shipbuilding ^b	0.0	0.0	0.0
Electrical industry	0.0	0.0	84.8
Chemical industry	31.2	30.3	81.4
Construction materials	0.0	0.0	65.0
Wood industry	23.8	22.7	79.0
Paper industry	0.0	10.8	96.1
Textile industry	0.0	0.0	55.0
Leather and footwear	0.0	0.0	82.1
Rubber industry	0.0	0.0	72.5
Food processing	41.1	34.5	66.6
Tobacco	100.0	100.0	100.0
Miscellaneous industry	0.0	0.0	4.6

Notes:

^aDzeba and Beslac, *Privredna Reforma*, p. 71. Since the source does not indicate exactly what types of price controls are included, and I can only infer that they are talking about the wholesale prices, it is necessary to view the data in the table with some reserve. However, the ubiquity and importance of some type of administrative control over prices, whether price ceilings or requirements that firms must announce their intention to raise prices in advance, is evident.

^bThe absence of controls over prices in the shipbuilding industry is misleading; the reason for this is that this industry is predominantly oriented toward export markets, so there is less need for control over prices.

markets. I have argued earlier that it is very difficult to eliminate these divergences, and the Yugoslav case lends strong support to this claim. As long as domestic prices differ widely from those in foreign markets, instruments must be developed that bring these two sets of prices sufficiently into line to permit trade to take place. In the CPE this problem is skirted by the expedient of not permitting prices to have a determining influence on export and import decisions and subsidizing those foreign trade firms that make losses and taxing those that make profits due to the price divergences. Once this primacy of centralized, direct, physical planning is abandoned, either domestic prices must be changed to correspond to world prices or administrative and financial instruments must be developed to compensate for the divergences. The use of such instruments is not a satisfactory substitute for a price reform that enables the market to operate freely, since they can never be as flexible as the market mechanism and always contain the danger of bureaucratic meddling in the detailed affairs of the economy. As late as 1965, the Yugoslav price structure was still far from satisfying the need for a reliable yardstick of value for purposes of decisions on the allocation of resources within the economy or in foreign trade activity. The Yugoslav Minister of Finance, Kiro Gligorov, in a speech to the Federal Assembly on June 9, 1965, argued strongly in favor of the considerable shifts in prices that were part of the 1965 reform. He argued that the low prices for energy, raw materials and semi-manufactured products, and transport, all of which are relatively scarce in Yugoslavia, should be raised relative to the prices of manufactured products. In addition, imports were subsidized by a low effective exchange rate of 800 to 900 dinars to the dollar, and exports of manufactured products were subsidized by a much higher rate averaging 1,055 dinars to the dollar. He further stressed that this condition will place a burden on the economy for the next 15 to 20 years, as some large investment projects were being started on the basis of faulty calculations. The benefit

of liberalizing trade was that the veil was removed and true relations were revealed when trade is based on world market prices.¹

The need for a very significant realignment of prices, by administrative means, and the raising of the general price level in the process, as part of the 1965 reform, exemplify some of the legacy problems discussed in the earlier section. The plan was to raise the general price level by 24 percent over the 1964 level, with prices in industry and mining rising by 14 percent, in agriculture by 32 percent, transport 26 percent, construction 22 percent, and in other activities 45 percent.² Within industry, prices of processing branches were to rise only 8 percent, and raw material prices three times as much. For example, the price rise for iron ore was set in the range of 41 to 59 percent, for aluminum 45 percent, for crude steel 63 percent; and prices of medicines were to fall by 9 percent, cotton fabric by 6 percent, and rubber footwear by 10 percent.³ Since a major aim of this reform was to enable Yugoslavia to enter more fully into an international division of labor, these price changes reflect, in part, the disparities that existed between domestic and world prices prior to the reform and were to be removed.

¹Kiro Gligorov speech of June 9, 1965, to Federal Assembly, in Privredne Reforme, Belgrade, 1965, pp. 13-14. A Yugoslav economist told me that he believed that Yugoslav prices had been very far out of line. He believed that, if prices were changed to represent those reigning on world markets, it was quite possible that some of the Slovenian factories, which are now held up as models for efficiency, would prove unprofitable. He argued that these enterprises had paid very low prices for raw materials and food both from other regions of Yugoslavia and from abroad, and were assured high, protected prices for their products in the domestic markets. With increases in prices of raw materials, food (and therefore payments to workers), and competition from imports, the situation of these manufacturing enterprises would radically change. If this rather extreme forecast approximates reality, it provides very interesting evidence on the legacy problem.

²Dzeba and Beslac, Privredna Reforma, p. 132.

³Ibid., pp. 133-137.

FOREIGN TRADE AND FOREIGN EXCHANGE SYSTEM

A Yugoslav economist, Rudolf Bicanic, has suggested that foreign trade is like criminal law. Each is the most sensitive sector in its own area. A study of the foreign trade system of a country will give a very good insight into the whole economic system, just as a study of the criminal law will give a good picture of the whole legal system of a country.¹

In line with the gradual transformation of the Yugoslav economic system from a CPE to a visible hand system, the Yugoslav government has worked to modify the centralized foreign trade and foreign exchange system. However, just as had been true in the case of the banking system,² Yugoslav leaders had an ambivalent attitude about the desirability of introducing market elements into the foreign trade and exchange systems. Although the need to provide greater independence for enterprises dictated a decentralization in the field of foreign trade, the balance of payments problem, the need to meet obligations under the bilateral clearing agreements, and the desire to keep some of the crucial levers of control at the central level all militated against a complete abandonment of the command economy and priority economy elements in foreign trade and foreign exchange. Thus, despite valiant attempts in 1952 and again in 1961 toward a more liberal, market-oriented trade and exchange system, the progress has been halting. Even though the very important 1965 reform provided some of the necessary conditions (a policy of deflation, devaluation, and price adjustments) it did not result in an immediate transition toward a free foreign trade and exchange system.³

¹ Discussion with Rudolf Bicanic, Zagreb, September 17, 1966.

² See my paper, "Centralization Versus Decentralization: The Case of Yugoslav Banking," pp. 361-373.

³ A Yugoslav economist wrote in 1966 that the reforms in the foreign sector of the Yugoslav economy lagged behind those in the domestic sector. Z. Mrkusic, "Razvoj Jugoslavenskog sistema spoljne trgovine," Trece Medunarodno Savetovanje Privrednika i Pravnika, Zagreb, 15-17 September 1966.

In a decision published in August 1966,¹ the principle of compulsory cession of foreign exchange earnings to the National Bank was confirmed, but the amount of foreign exchange exporters could keep and use freely (retention quotas) was raised for most products from that provided in March 1966.² In addition, there was a change from a mere promise that exporting enterprises could purchase given amounts of foreign exchange from the bank to an actual retention of the appropriate percentage of foreign exchange earnings, and a provision that enterprises exporting 51 percent or more of their output may use all the foreign exchange in their bank accounts to buy raw materials or intermediate products.³ This piecemeal approach to increasing the freedom of enterprises to use the foreign exchange they earned was opposed in a joint proposal of the Economic Chambers of Belgrade, Zagreb, and Sarajevo, in which they suggested the introduction of a completely decentralized foreign exchange system.⁴ Although this proposal was not adopted and serious doubts exist whether the particular plan recommended would have proved feasible, it provides evidence that there are forces in Yugoslavia that wish to eliminate the central control over foreign exchange, but that the system's directors are not yet ready to eliminate this important lever of control.⁵

¹Sluzbeni List SFRJ, XXII, No. 32, August 10, 1966, pp. 655-656.

²Ibid., No. 10, March 9, 1966, pp. 203-204.

³Ibid., No. 32, August 10, 1966, pp. 654-655.

⁴This proposal provided that enterprises keep the major share of foreign exchange receipts and cede to the central government only enough to cover the foreign exchange needs of the government. Those enterprises not earning foreign exchange could no longer obtain it from the government, but would have to make arrangements to obtain it from those enterprises earning it, either directly or through banks. The proposal aimed at eliminating the redistribution of foreign exchange through central organs, while still avoiding an open market for foreign exchange, since this would, under Yugoslav conditions, result in a fluctuating market exchange rate above the official one. Radio Zagreb broadcast, August 1, 1966.

⁵An interesting aspect of the Yugoslav system is that banks have taken over the basic functions of foreign exchange control. For example, by control over foreign exchange and credit they assure the fulfillment by enterprises of obligations undertaken by the government in its bilateral clearing agreements with socialist countries.

Just as steps were taken in 1966 to modify the foreign exchange system incrementally, a decree by the Federal Executive Council in September of that year provided for a considerable liberalization of foreign trade in 1967.¹ However, despite this liberalization, about 44 percent of raw materials and semi-manufactured goods, 77 percent of consumer goods, and about 50 percent of capital goods imports were still left under central control.²

The continuation of significant controls over foreign trade and foreign exchange 15 years after the first attempts to move toward a visible hand regime with worker self-management is a function of the objective balance of payments situation and the views of the system's directors. I do not wish to argue that the persistence of central controls may be explained simply as a legacy of the CPE. I would suggest, however, that the difficulties experienced in expanding exports, especially to convertible currency markets, are due, in part, to some of the legacies discussed earlier. Similarly, the leaders' beliefs are also influenced by their experiences during the centrally planned period and the difficulties faced in the period of transition.³

¹Joze Korosec, "More than Half of Imports Liberalized," Yugoslav Export, November 1, 1966, pp. 1, 7.

²Yugoslav News Bulletin, V, No. 392, January 10, 1967, p. 8.

³The unfortunate results of the 1961 reform, in which an attempt was made to abandon the closed economy element, have made Yugoslav leaders more cautious about the speed with which to implement changes in the foreign sector.

VI. CONCLUDING REMARKS

This study of the legacies of a CPE leads logically to two major lines of inquiry. I have consciously concentrated on a relatively abstract model of the CPE, in which the most important features common to all CPEs have been isolated; the next step is to study various present-day CPEs, with a stress on the differences among them. Empirical studies of this type should select those parameters likely to cause significant differences in the legacies, and particularly in the quasi-legacies that determine the transitional problems. Some of the parameters to be included in such studies are: (1) the level of economic development when the CPE was initiated in a country and the present level of economic development; (2) the degree of dependence of the country on foreign trade; (3) age, background, and probable preferences of the present system's directors, their degree of political support in the country and the likelihood that they might be replaced; (4) the relative importance of centrifugal forces caused by regional differences; and (5) the length of the period during which the CPE has reigned in the country and the degree to which various key elements of the CPE have already been modified.

The second line of inquiry would deal primarily with the lessons that would be of primary interest to leaders of present-day underdeveloped countries. For this purpose, the evaluation of the legacies of the full-fledged Stalinist CPE may appear similar to discussing the probate of the will of a straw man, since it is not likely that leaders of many present-day underdeveloped countries have the desire or the ability to establish such a system. Therefore, a useful line of investigation for future work in this field would be a more profound analysis of the relationship between individual key elements of the CPE and their consequences during the life of the system, and between the key elements and the legacies they will leave behind. This analysis might focus on a search for modifications of the CPE that would keep the major desirable consequences and legacies, but eliminate or reduce the undesirable ones. It may be possible that

modifications will allow one to have one's cake and eat it too. Probably more important is the possibility of discovering some trade-offs in which one gives up only some part of the positive results in order to make a considerable reduction in some of the negative results. Let me suggest briefly some of the questions that should be considered in such an analysis: (1) Is it possible to have a less extreme version of the social ownership element, in which only the "commanding heights" are socialized, without giving up the major benefits of the CPE? (2) Could the macrolevel element of the pressure economy, that is, the high rate of forced saving, and the key features of the priority economy, be achieved without invoking the extreme Stalinist version of the command economy, pressure economy, and priority economy? This may be one of the key questions since many of the undesirable features of the CPE and its legacies result from the command economy and the extremes to which the pressure economy and priority economy are pushed in the pure model.¹ (3) Should extensive development be practiced or should one start with a more balanced approach, paying more attention to the questions of productivity, costs, and quality even at the early stages of development? (4) Would it not be better to adopt a modified version of the closed economy element, in which an attempt was made from the very beginning to prepare the economy for eventual inclusion in an international division of labor?

The aim of this type of analysis of modified Soviet models would be to discover whether such systems would be feasible. If feasible,

¹The significance of establishing a system that permits rational choice, especially at the early stages of development, is stressed in Peter Wiles' comment: "It is a mere fallacy, however often it is repeated by however high authority, that poverty and underdevelopment give us more excuse for arbitrary choices, while rationality becomes important only when a certain prosperity has already been achieved. Obviously the exact opposite is the case. For arbitrary choices are wasteful choices, and a poor man can afford waste less than a rich. True, a rich man or country faces many more choices, and the subject acquires greater intellectual interest, what with fuel policy, higher education policy, choice between techniques, choice between road and rail, and so forth. But the dull choice between bread and potatoes is more important than these in terms of human welfare." P. J. D. Wiles, The Political Economy of Communism, p. 95.

would any be appropriate for the initial stages of development, as well as being suitable, with only minor modifications, for a more mature economy, thus eliminating or alleviating the legacy problem? If it were found that, by giving up some of the extreme features of the Stalinist model, the rate of development is reduced in the early stages (and this is not a foregone conclusion, by any means) it would still be necessary to compare this loss with the possible gains from eliminating or reducing some of the most undesirable legacies of the extreme model.

If my claim is accepted that legacies represent an important additional dimension in the study of comparative economic systems, then one of the major results of this approach is to open up large new areas of research for those fearless souls who dare to tread this treacherous soil.

DOCUMENT CONTROL DATA

1. ORIGINATING ACTIVITY THE RAND CORPORATION		2a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED
		2b. GROUP
3. REPORT TITLE THE LEGACIES OF CENTRAL PLANNING		
4. AUTHOR(S) (Last name, first name, initial) Neuberger, Egon		
5. REPORT DATE June 1968	6a. TOTAL No. OF PAGES 71	6b. No. OF REFS. ---
7. CONTRACT OR GRANT No. F44620-67-C-0045	8. ORIGINATOR'S REPORT No. RM-5530-PR	
9a. AVAILABILITY/LIMITATION NOTICES DDC-1		9b. SPONSORING AGENCY United States Air Force Project RAND
10. ABSTRACT <p>An analysis of a centrally planned economy (CPE) in an attempt to isolate those "legacies" that ultimately impede transition to a freer, more productive economy capable of participating in an international division of labor. In a CPE, centralization is both an important policy objective and a <u>modus operandi</u> and has certain positive consequences, such as freedom from market instabilities, a more equitable distribution of income, higher education and skill levels, and the ability to channel capital investment. Some of these may be imperfectly realized, however, and there are some inherent negative consequences as well: for example, administrative rigidity and inefficiencies, irrational pricing, arbitrary exchange rates, and production and quality control problems. In spite of growing dissatisfaction in many areas, the problems in foreign trade are the ones that finally force a change in the system. The difficulties experienced by Yugoslavia in the area of foreign trade, after 15 years of attempting to move toward a "visible hand" regime with worker self-management, are an indication of the strength of some of these negative legacies.</p>		11. KEY WORDS Less-developed countries Economics--foreign Finance--international Prices USSR--Economics Yugoslavia Markets Labor